DECEMBER 1976

THE SAILORMAN

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Volume 5-3

A Journal published by the POLYNESIAN CATAMARAN ASSOC.

Cover: Ladies sail on TANGAROA Mk. 1V at Portland 1975.

"Watch out...for those females that are triced up and gasketed-in in some futile attempt to alter their model from that of a Hanseatic Cog to a Whitehead torpedo, for if called on deck early in the morning to hear the birds caroling overhead, they will be about as good natured as a hermit crab snapped out of its shell, which was built by another. Beware also of those beauties who are periodically rebuilt and refitted at the dockyard of some beautician, whose only ambition is to look 'killing' and whose murderous claws are painted as if they were an accessory to the fact.

"These females may be alright if you can afford a steam yacht with a French maid to assemble them in the morning and unrig them at night, but on the H-28 there will be no room for their spare gear and top hamper, and they will affect the smooth working of the H-28 like a monkey wrench in the crankcase."

"But there are girls (God bless them) who can take it, are real companions and helpmates; who can stand a trick at the tiller or galley. That's the kind that's right up our alley. If you have some kind of a life contract or agreement with such a one, you had better build a golden halo around her in your mind's eye, and let her know it once in a while, for you and she working together can bring out all the pleasure, charm, and melody there is in a craft like the H-28."

"The kind of companion you want is one who likes either the east wind fresh from the Gulf Stream, or a west wind that has blown through the needles of ten thousand pine trees; who can enjoy the dramatic prelude of a thundersquall or, when the fog bank rolls in from the old Atlantic, will hand you the right chart and help you make a true fix."

L. Francis Herreshoff ... Sensible Cruising Designs.

(For H-28, read Polynesian catamaran, with apologies to the late great L. Francis Herreshoff. Editor).

Sent in by Roland Huebsch.

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A WORD IN YOUR EAR

The AGM of the PCA is to be held on Saturday 8th January, 1977 at the Richmond Community Centre, 4 Sheen Road, Richmond, Surrey. The premises will be available from about 2 p.m. onwards. The meeting should start about 7 p.m. as before. Bar and buffet facilities will be provided.

The membership list will in future be sent out with the Mini-Sailorman, and hopefully Area Secretarys' will already be arranging next years calender.

We have been challenged by the Multihull Offshore Cruising and Racing Association for the 1977 Azores race to Horta to field more boats than they can (see page 11). Details from Mike Ellison, Drayton Lodge, Hermitage, Newbury, Berks. I think it would be good if a small nucleus, at least, of suitable Polynesian catamrans were to be able to muster for the start at Plymouth.

Which brings me to navigation and boat handling. Our Sailing Secretary is to be congratulated for promoting this aspect especially to those with new cats and little sailing experience. It is when we know the basics thoroughly, that we can go racing offshore; cruise the rock strewn Channel Isles; sail around a tempestuous Lizard and Lands End; track across the shallows and around the sand banks of the Thames Estuary in the middle of the night; or just potter about, all with more confidence and be able to realise all the dangers involved and then achieve some measure of satisfaction in this fascinating sport of sailing.

Jim Wharram has been unable to write for this issue, because the publishing of the Sailorman coincided with James Wharram Associates move to Ireland. We wish them well and look forward to Jim's column in future. Their address is now:- James Wharram Associates (International) Ltd., Killowen, New Ross, Co. Wexford, Ireland. The Longhouse is still open and is being run by Anthea Evans (UK agent).

Thanks to Don Dean for a few suggestions for the Sailorman.

James Wharram Associates will be having a stand at the Boat Show again. The PCA will be entitled to a class association desk as well.

Fair winds to you all,

Richard Bumpus

Association News

PCA

Summary of meetings which I attended (or missed) 1975/1976

by Ruth Wharram.

NSW, Australia

During my stay in Australia, Ken Lawson organised a PCA meeting aboard his Narai SHIRAZ in September, 1975. It was the first of its kind in Australia and attracted about twenty people including six builders. There was no sailing, but Ken demonstrated his new air cooled Ducati diesel industrial motor coupled to a 30" shaft of an old army surplas two cylinder outboard, which had previously proved to be unreliable. We motored out across Broken Bay and had coffee in one of its beautiful anchorages.

****

Hemmant, Queensland, Australia

I missed this meeting at Hemmant in Queensland. It was organised by John and Dorothy Parton for the launching of their Tehini KA-NEE-TA (see Sailorman June 1976). The catamaran was launched in April of this year. The party consisted of about 100 people who consumed, "80 steaks, a full side of lamb, 10lbs. of sausages, 8 dozen bread rolls, one gallon of baked beans, 15lbs. onions, half a case of tomatoes, 40lbs. of baked potatoes, apart from mountains of chips. A five piece band was also engaged to play. "It must have been a great success!

****

Auckland, New Zealand

I organised a meeting in Aukland, thanks to the help and hospitality of Peter and Carol Crawford, who offered their home as a meeting place and provided coffee, beer and snacks for about 36 people. The meeting started at 6 p.m. and the last guests did not leave until before 2 a.m. Among those present were 23 builders. Raka builder John McCartney (19 Alton Avenue, Northcote, Auckland) offered to be the area secretary for New Zealand. He hopes to organise further meetings with boats sailing.

I showed our films, 'The building of TEHINI' and 'A Family of boats' along with some slides. Bram Breetvelt showed some photos of his Oro MOANA NUI. He told us of his sail in a force 8 with 10 people aboard averaging 17 knots for 3 hours including a top speed of 21 knots. On another occasion, he took a group of 31 young people out to a nearby island. Three dinghies, all the people and sundry gear including a refrigerator and a generator came to 4½ tons! It shows what can be done with an Oro.

There was a hair raising account of Mike Bromley's crossing of the Tasman from Australia in his Tane. There was another account of a different Tane with leeboards and a larger sail area which got caught in a hurricane off the east coast of New Zealand. This boat was surfed down the waves (there were no warps or tyres to trail). Unfortunately, I did not meet either skipper. I did meet Trevor Tutte and Lynda Peter, who had sailed their Tangaroa BRIGHTEYES from England to New Zealand.

The most important thing of this meeting was to introduce builders to one another for an exchange of ideas, mutual help, advice etc., and I am sure this group will develop into a very lively and active one.

****

PCA

Wellington, New Zealand

At Wellington, at the southern end of North Island, Professor Stanley Slater organised another meeting. It started with a buffet for 13 builders and a few friends at his home, followed by a lecture with a film and slide show open to the general public at the University.

Considering the speed with which Stanley Slater is building his boats (one monohull, a Tigercub catamaran, a Maui and an almost finished Hinemoa within 3 years, with a trimaran and a Tanenui already planned) he alone might be able to supply a small fleet at any meeting.

****

Wells-next-the-sea, Norfolk, UK

The combined Midlands and East coast rally was held on May 23rd, to which 32 people (10 builders) came including 3 boats. Unfortunately, the sands had shifted during the winter months and Brian Harriman, who had brought down his Tangaroa 7 SEAS the week before especially for the meeting, found her beneaped. So was the famous 'south coast Tane' LAA MAO MAO now based on the east coast and owned by David and Elaine Jennings. Fortuantely, Sandra and Bill Hather came to the rescue with their Tane MANU RERE. They went out for a sail several times taking people from 7 SEAS where the rest of us had gathered and where Brian and David Harriman and Sue Vergette served cups of tea and snacks.

For an evening, John Moore had hired a room in a pub where Brian showed some slides of his diving holiday in the Seychelles, including a Tangaroa anchored there, while I showed some slides from Australia, New Zealand and the Tasman.

Thanks to the Harrimans and the Hathers who offered their boats and such hospitality and to Kath and John Moore who organised the meeting. It was a very successful one. Next year, I hope John Moore's Oro TIPIPHENUA will also be there.

****

Queenborough, Isle of Sheppey, Kent, UK

One week later, the Whit weekend meeting was held at Queenborough. About 55 people arrived with 7 boats sailing. They included Don Dean's Oro SIS, which was dressed all over, John Fairhurst's Oro/Tehini MAHANUI, Frank and Pat Mortain's Tangaroa/Narai TAMAR, John Agnew's Tangaroa TIKKITAK, Tony Meakin's Tane SHURI, Richard Bumpus' Hinemoa SURF SONG and Stuart Sutherland's Hina TIKI - a good cross section of all sizes.

On arrival I was saddened to hear from Sheila Johnson about the fate of their Tane but I hope it will be sailing again at next years meeting together with Chris Giecco's Tangaroa, by now well advanced in the building stage.

On the Saturday afternoon SURF SONG and SHURI went sailing, loaded with crew, and were hit by a squall as they sailed through a thunderstorm just as TIKI arrived. All three boats arrived safely home.

With the kind permission of the Vicar, the Church Hall was again the shore base for a get-together in the evenings.

On the Sunday, skippers, builders and would-be-builders visited various boats, and later 5 cats set off for a luncheon meeting at Stangate Creek. As we on MAHANUI had to wait rather a long time to be afloat, some of the fleet were already on their way back when we arrived at the meeting place. We met John Agnew as he arrived on

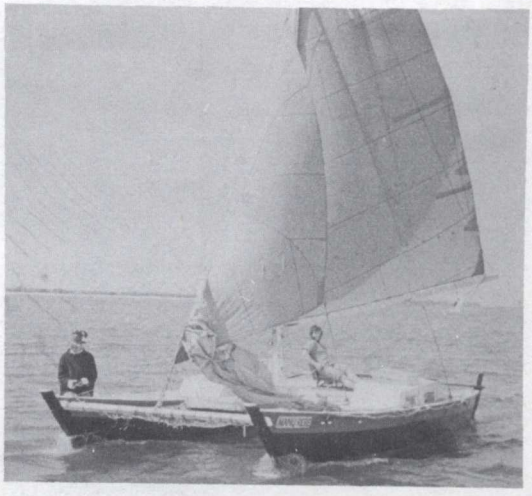
PCA

KISKADEE (left) and TIAN 1V at the Pacific Northwest meeting 1975.

RAKA and AREOI prototype at Milford Haven 1976
(photo Mark Richards)

7 SEAS at Wells-next-the-sea 1976
(photo Ruth Wharram)

SURF SONG at Queenborough 1976
(photo Ruth Wharram)



MANU RERE as seen at the
Wells meeting 1976

PCA

TIKKITAK. He had just sailed in from Tollesbury Fleet on the Blackwater. He sailed in playing the bagpipes! To him, went the award for the longest distance sailed to the meeting. The best amateur built boat award went to John Fairhurst for his MAHANUI.

Chris Giecco organised a bar-b-que in the church hall on the Sunday evening. I showed my slides of Australia and New Zealand again. There was more sailing again on the Monday. Thanks to Ted and Sheila Johnson for organising the meeting and to all skippers who allowed us to view their boats and took us sailing.

****

Milford Haven, Pembrokeshire, UK

The sailing week which started in Milford Haven on Saturday July 24th, and ended at our new Irish base, Killowen on the river Barrow, was blessed with perfect weather. It was very well attended with about 60 people and a sizeable fleet of 11 boats. Michael Briggs, our Sailing Secretary, organised the sailing. So on the Saturday morning our TEHINI, the AREOI prototype, 2 HINEMOA'S and a MAUI sailed in the Haven. At lunchtime crews were swopped and new arrivals taken aboard. Later in the day, George and Joyce Payne arrived on RAKA, Charles Birch in his Tane RAPA and Les Appleby aboard his Tane SLOCUM JOE.

In the evening slides were shown. A discussion followed with regard to sail training and navigation. The Sailing Secretary has put forward his views elsewhere in the Sailorman. On the Sunday, TEHINI set sail with 24 crew divided into two watches, one learning navigation while the other handled the ship. Further slides were shown in the evening.

On the Monday evening, two more Tane's arrived, those of Tommy Thomas from Cardigan Bay and John Wyatt from Southport. On the Tuesday, TEHINI and these two Tanes set sail for Ireland. The trip went well. We sailed up the river Barrow to New Ross, cleared customs, visited 'Dempsey's Bar', and then had another gathering outside our new base 'Killowen Cottage'. A delicious meal followed.

Thanks to everyone who came, and I hope we will see you in Ireland next year.

****

Dutch CTC Meeting, June 5-6 1976, FLUESSEN, Friesland. by Tony Meakin.

At the present rate of exchange Holland is an expensive country to visit, but any country which has so much water cant be all bad!

Memories of the Dutch meeting at Fluessen in Friesland include sitting at a table sipping coffee and Dutch gin as Nico Boon's Hina ferried visitors out to the bigger boats and small boys fell fully dressed into the water.

Drinks in the sun on the grassy bank by the waterside - why cant Queenborough be like this? The advantages of locked inland moorings soon became obvious and it's not far from the sea (it's not far to anywhere in Holland!)

A Tanenui (straight from its glass case) caught my eye and made all the Tane owners ashamed until we read Jim's comment on 'sea worn' boats in the last issue. It must have been the best condition boat at the meeting. I could see my face in the varnish of the belaying pins. A recently finished Narai,belonging to Ronold and Maryke de Boer, was a pleasure to visit and looked every inch a well found boat right down to the birdcage in the galley.

Many, many more too numerous to mention, I have never seen so many Polycats and lovely people all in one place. After a friendly meal in the superb sailing centre, I drove through the night to Vlissingen and back to our east coast mud. Sheerness, we love you, but Friesland is a great temptation.

****

PCA

Portland Meeting, August 28-30 '76, UK by Tony Meakin.

After an uncertain start, due to bad weather, the Portland meeting finally got under way. Unfortunately two boats made it, and one had to leave in the early hours of Sunday morning. All the more credit to Geoff Fallon and NICK OF TIME for seeing that everyone got a sail. Was it really 35 people on board Geoff or did it just seem like it? All that cargo and still we made 6 knots in light winds. There is no truth in the rumour that Geoff built the boat with illegal immigrants in mind! 'NICK' is built of GRP and has lots of good ideas on it.

George Payne organised a very useful symposium on the Sunday evening, followed by a sailing film - 'On the other side'. Thanks George.

With no improvement in the weather, Monday left us with little to do but finish off the beer and bask in the facilities of the Royal Navy Sailing Association. Our thanks to Captain Briggs for arranging it and especially to Malcolm Nolan of HMS Osprey who did everything he possibly could (and may be somethings he shouldn't - I'd never sailed a Bosun dinghy before) to see that we had all that we required. Thank you Malcolm.

We have an invitation to Plymouth for next August - the weather may be better but the facilities will take a lot of beating.

****

AGM AGENDA

1. Minutes of the last Meeting.
2. Matters arising.
3. Chairman's report.
4. Secretary's report.
5. Treasurer's report.
6. Sailing Secretary's report.
7. Editor's report.
8. News and reports from Area Secretaries.
9. Election of Officers.
10. Meetings for 1977.

Proposals to the AGM

1. The subscription for 1977/8 should remain at £2.
2. All overseas members shall pay an extra £1 to cover airmail costs.
3. Decentralisation of the PCA into national or subnational groups to improve local communication and facilities.
4. The Sailing Secretary's PCA Sail Training Facility (3 sections - see proposals in GONE WITH THE WIND.)
5. A multistart pursuit race to be held in '77, based not on PY or IOMR, but on SPM (satisfaction per member!)
6. Sailing directions and pilotage information appropriate to shallow draught multihulls, to be collected by the PCA with a view to publication for the benefit of members.
7. Any other business.

Members unable to attend the AGM who wish to express their views on these or any other topics relevent to the whole membership, should write to the Secretary before 2nd January, 1977.

Members are reminded that area secretaries are now recommended from areas to the AGM, and not appointed by the AGM, so please contact your local members or Area secretary and send or bring your recommendation.

Tony Meakin, PCA Secretary.

PCA

HAVE YOU SEEN THIS HINA?

"In 1972 I built a Hina, MAKUTU, Polynesian for witchcraft, and berthed her at Skippool on the River Wyre, from where I sailed her. By the end of '74, I had a young family and required something with more accommodation, and so I bought a small 4 berth monohull. Time passed, but I couldn't bring myself round to selling my Hina. I had great sentimental attachment for her. I borrowed the money for materials to build her, and the thrill I felt when she first floated in salt water was a completely new experience. She was the first new boat I had owned.

One fine summer day, I called round at Skippool to take a look at my Hina, but it became obvious that she had been removed by someone. If that person should be a member of the PCA I would like them to get in touch with me. I feel no vindictiveness or anger, only sympathy. I realise how desperately that person must have wanted a boat of his own, and probably didn't have the means to get his own. I know the feeling only too well.

I admit MAKUTU looked neglected, but I would know her again if I ever came across her again, for having built her I must know her. I know the slight errors in measurement, discrepancies that I only could recognise. But I would like the person who has her now to contact me so that we could talk about the situation. Perhaps he would take me for a sail?"

If you can help, contact Harry Crossley, 20 Walden Avenue, OLDHAM, Lancs., OL4 2PW.

****

Geoff Archer of 1 Leona St., Boondall 4034, Queensland, Australia, extends a welcome to Polycat people at his home with his Polynesian bar - sometimes known to pitch and toss like a boat! He sent us a picture of part of the Queensland coast - it looks sheer paradise! Hope you make it to the UK sometime.

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Rick Holland of 973 Mink Avenue, West Shore Pickering, Ontario, Canada, writes to say he is busy building and fitting out his Tangaroa and dreaming of the launching day.

****

In the Sunday Express, June 20 1976, it was reported that the Martin family from Hayle in Cornwall set sail from Falmouth in their Tehini for Australia. They are going to make the best of a Cornish Christmas at sea. We hope all goes well for them.

****

Insurance - The PCA Secretary wrote to ST. MARGARETS INSURANCES LTD., 153-155 High Street, Penge, London, SE20 7DL, with regard to Polycat insurance in the UK. The company say that they may be able to offer very competitive rates with approximately 10% saving on premiums, for members of the PCA.

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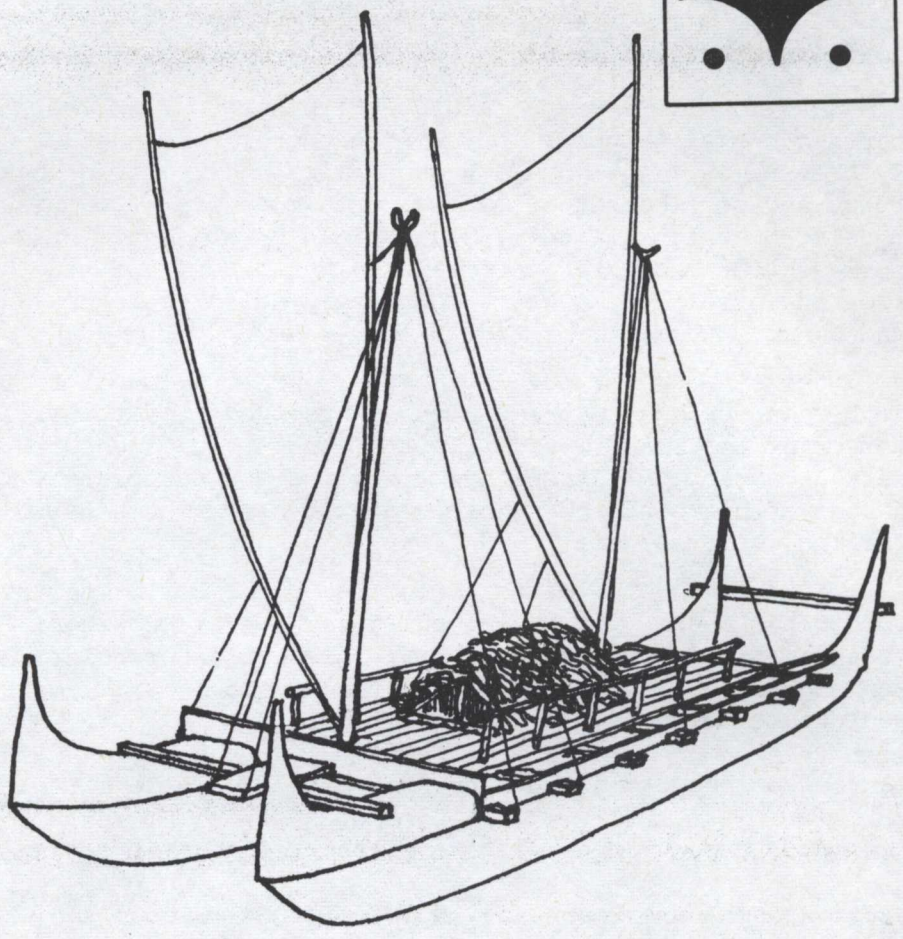
Polynesian Catamaran Design



A letter from
Roland Huebsch, Toronto,
Ontario, Canada.

I've just read an interesting article in the April National Geographic Magazine about the construction in Hawaii of a replica of one of the old polynesian double canoes that were used for long inter-island voyages hundreds of years ago.

Eighty feet long, the hulls are built of plywood and fibreglass, but the design, rigging and pandanus matting sails are all authentic. Last summer she sailed to Tahiti and Raitea and back to Hawaii navigating by traditional Polynesian methods, (Dr. David Lewis was instructing the crew) and carrying the same supplies that would have been carried hundreds of years ago: cocoanuts, dried bananas, sweet potatoes, breadfruit, dried fish etc.

During a shakedown voyage between some of the Hawaiian Islands a mishap occured one stormy night. The hull tops are open to accommodate paddlers during calms and at other times are fitted with fabric storm covers. During the night wavetops, deflected by a temporary outboard motor bracket, flooded the starboard hull and it was found impossible to bail out the hull because new waves were constantly filling it, it was decided to cut down the masts to reduce the danger of capsizing. The vessel lay beam on to the seas until morning when she was taken in tow by a coastguard ship and brought into port otherwise undamaged. The mishap prompted the designer, Herb Kawainui Kane, to write:

"Ever since Hokule'a's 800 year-old design first appeared on my drawing board, I had wondered how well she would hold together in heavy seas. Now she had survived stresses that might have shattered a rigidly constructed modern catamaran, for her flexible lashings enabled her towithstand the battering of eight foot waves and the strain of being towed."

Another endorsement of Jim Wharram principles!

Gone with the Wind

- From the Sailing Secretary.

In the rare moments when your Sailing Secretary hasn't been mugging up for Oxford finals and his (far more daunting!) Yatchmaster's exam, he has been trying to think about things he ought to (see his last article), namely, racing and sailing instruction. With the encouragement of several PCA members and the meeting of those who went to the Milford Haven rally, he was told to get on with it, and has given birth to a set of proposals to set up a PCA Sail Training Facility which he hopes may be approved of by vote at the AGM in January. Let him explain:

"Having in my last article advised readers in need of instruction to write to the RYA for names of Sailing Schools, it was suggested to me that the PCA could, and ought, to provide its own service, recommending to each applicant a multihull sailor who could give multihull oriented training, either in the applicants boat, or (if the latter is a builder) in his own catamaran, in both cases for a reasonable fee, and with the guarantee of the central body that the applicant would get value for money. Here, in proposal form (which will be put to the AGM for approval) is what has emerged from our discussions.

Proposals for setting up a PCA Sail Training Facility:

(* see notes)

A. AIMS

1. To provide, by coordination, 'high quality' (1*) instruction in the sailing of multihulls (2*) in its widest sense, in applicant's boats, or (for builders and others) in instructor's boats, in both cases at reasonable cost (3*).

2. To establish (if necessary over a period of time) a body of part and/or full-time instructors, qualified by recognised certificates (4*) to teach at different levels of competence differing (but recognised) syllabi (4*) from elementary coastal cruising to offshore and ocean cruising and racing to the standards which the Facility will (eventually) guarantee (4*) to its applicants.

B. FUNCTIONS and STRUCTURE

1. A Chairman (5*)
   - to be a member of the PCA committee.
   - to report annually to the AGM.
   - to chair Facility Committee meetings.
   - to carry out (if he wishes) one of the offices 2,3 or 4 and to appoint the other two (6*).

2. A Recruiter (7*)
   - to be present at all Facility Committee meetings.
   - to recruit multihull owner/skippers to instruct e.g. by articles in Sailorman and speeches at rallies and AGM.
   - to examine potential instructors in cooperation with 3.
   - to advertise the Facility to all multihull owners.

3. A Regulator (8*)
   - to supervise (especially at Facility Committee meetings) the establishment and maintenance of qualifications, standards, syllabi and any Certificates of Competence which may emerge.
   - to be, at least, an RYA/DTI Yacht-master.
   - must not be the same person as the organiser.

4. An Organiser (9*)
   - to attend all Facility Committee meetings.
   - to supervise the matching of applicants and instructors, with reference to dates and required syllabi, and to put them in touch with each other.
   - to arrange dates for Facility Committee meetings.
   - must not be the same person as the Regulator.

5. A Facility Committee (10*)
   - composed of 1, 2, 3, 4 above, AND of all instructors recognised by the scheme to whom alone are reserved votes on all matters of standards, syllbai, fees etc.

Meetings
   - to be twice a year (or more) in Spring and Autumn.
   - open to all PCA members.
   - to decide all matters of standards, syllabi fees, and to facilitate the continuous work of the Organiser.

C. FINANCE (11*) and MISCELLANEOUS RULES

1. All tuition fees and methods of payment to be entirely the concern of the instructor and his applicant.

2. The Facility Committee (at it's discretion, and only in the interests of Instructors) may choose to regulate or give guide lines for amounts of fees for different syllabi, times, travel and boats (subject to review each year).

3. The Chairman and Executive shall receive no fees for their work beyond recompense for stationery, phones and postage, unless the Facility Committee shall choose at its Autumn Meeting to recompense the Organiser for the burden of his work. All such payments shall be made from a % taken proportionally from the annual Facility income of each instructor (these instructors voting the funds binding absent instructors in good faith to contribute).

4. Following upon the report of the Facility Chairman to the PCA AGM, the AGM annually must vote confidence in the Facility by accepting his report for the Facility to remain in being. It has no powers of its own to elect either Chairman or its three executive members (The Chairman is elected annually by the PCA and appoints his executive then).

5. (12*) Any alterations in the rules and constitution of the Facility must be submitted to the PCA AGM by the Facility Chairman in his report and voted on there and then.

NOTES (*)

1* A 1 & 2, B3, C2.
High quality is one corner-stone of the Facility Concept which must be fought for right from the start if its fee paying service is to be justifiable and of value. This is the job of the Regulator (hence his need for an RYA/DTI recognised certificate. See also notes 4*, 8*, 10*, 12*).

2* A1
The multihull emphasis of the Facility is its main raison d'être and need not be confined to Polycats alone, since all catamarans (and most tris) require a slightly different knowledge of handling techniques in various wind and sea conditions, when compared to monohull practise. (see note 4*).

3* C1 & 2.
Cost will of course vary according to whose boat is used, and distances of travel. (see notes 10*, 11*).

4* A2, B3 & 5, C2 & 4.
'Qualified by recognised certificates': It would be of enormous advantage to be able to use the RYA certificate as Instructor qualifications, RYA syllabi as our syllabi (with multihull sections added) and ultimately to issue or train for RYA certificates as one of their recognised schools since this would give the Regulator a national and impartial standard to work to and establish an automatic guarantee of quality in the Facility's training. However, as the RYA scheme itself is still relatively new, and as the PCA has few RYA qualified members, insistance on this standard too early would limit the Facility's ability to grow and teach. It is proposed therefore, to use a two-tier system supplementing RYA standards with provisional PCA requirements (worked out and enforced by the Regulator in consultation with instructors) but teaching from the very start according to the published RYA syllabi (see my article June 1976 Sailorman). Graded syllabi are vital if applicants are to be able to choose a course suitable for them. Instructors can then transfer from PCA to RYA tiers as they become qualified (clearly it is less a matter of ability than protocol, but unavoidable for all that!) Ultimately, the Facility may be able to submit Multihull clauses for inclusion in all RYA syllabi.

5* B1
It is open for the AGM to decide whether this could not profitably be a routine function for the Sailing Secretary.

6* B1
This power - belonging always to a PCA committee member is designed to maintain permanent close relations between Facility and PCA.

7* B2
Especially in the early stages, the Recruiter could be the same person as the Regulator, since their functions clearly overlap. The two offices should be held distinct in function even if they are combined in the same person, lest the mutual antagonistic priorities of large scale recruitment and maintenance of high standards become unbalanced.

8* B3
On this office falls the responsibility for establishing the 'quality' of the Facility from the very start. He should work with the utmost consultation with all those interested, and especially with the first few Instructors (see note 4*).

9* B4, C3.
By far the most time consuming office - and the only one continually 'on duty'. His function will not be unlike that of a computer dating agency - suiting Applicant A to Instructor B at time C at place D and leaving them undisturbed thereafter to develop their relationship.....

10* B5
Committee meetings to be open to prevent any financial exploitation, designed primarily to assist the Organiser in setting up Instructor availability time-tables (spring) and the Regulator in reviewing standards and syllabi in the light of the Instructors experiences (autumn)

10* B5 (continued)
The meeting should act as a forum in which Instructors make the voting decisions on all regulations affecting their tuition.

11* C1, 2, 3.
Finance rules are all designed to preserve within the PCA what MOCRA and the RYA conspicuously lack, namely, an absence of expensive self perpetuating bureaucracy. The Facility will not directly teach anyone to sail, will not receive any tuition fees, and will not become any kind of profit making business enterprise. Instructors, furthermore, will retain complete legal, financial and timetable independence with respect to their tuition, subject only to syllabi which they review at committee meetings and to fee guidelines on which they only may decide (similarly at committee meetings).

12* C4, 5.
This final rule attempts to distinguish clearly between the Facility Committee's right to control the framework of their instruction (since the voting members of the committee must be Instructors) and the PCA AGM's right to control the nature of the facility itself i.e. its position as Coordinator rather than Sailing School, and its financial detachment.

I regret that this article has been so filled with boring detail about something not yet even in existence, but I feel bound to lay it out now rather than at the AGM, whose capacity for swift debate on such a mouthful at first sight will not bew taken for granted by anyone who has attended any previous AGM (of this or any other organisation). It will, I hope, be taken and voted on only in the three sections A, B, C, and supported or opposed by members who have had time to weigh up the pros and cons. My next artcile in the next issue will, I hope, contain outline syllabi for any applicant for tuition to choose from, as well as addresses and phone numbers of the Organiser and Recruiter, so that teaching may really begin with a bang next summer.

How about someone writing to me about racing, just for a change?

Mike Briggs.

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From David Walsh, Editor MOCRA Newsletter.....

"The Sailorman comes to me courtesy of the PCA although I'm not a member. It is always interesting reading, even for one who usually sails trimarans! The June issue, however, was particularly good, especially the article by your Sailing Secretary, Michael Briggs.

I am in complete agreement with the comments on Multihull racing, rating rules, and the present position of IOMR. What is needed as Michael Briggs points out is greater support of racing by both MOCRA and PCA boats so that there can be scientific comparison of boat performance and rating rules.

With this end in view, I have a suggestion:
Next year could see bigger better fleets and so better racing. How? The '77 MOCRA AZORES RACE to HORTA is a true ocean race, the sort of thing that should appeal to PCA members (that is if I have your image right) How about PCA entering some boats next year? MOCRA managed 11 multi's in the '75 event. Couldn't the PCA manage to better this from its greater membership? Consider yourselves challenged to an organisational duel - I'll wager a crate of champagne (to be drunk by the race crews at Horta) that MOCRA fields more boats than the PCA in the '77 race to Horta.

The Boatyard

"NICK OF TIME"

Jeff Fallon of Havant, Hants., describes the building of his GRP Narai.

This Narai was born after much brow wiping from financial close shaves with escalation (and physical effort) - hence its name. The bulk of materials were bought before the onset of VAT, and the masts and sails before the 25% death blow.

From the start work was to proceed in harmony with the seasons. The frames for the mould were constructed under cover in the winter just after the start of the New Year '73. In the spring the mould was erected outside and clad in 5/16" oil tempered hardboard on the inside of the frames (to make a female mould) smooth side in. 2" x 1" was nailed on edge facing inwards to make gunwhales and the hog was formed by laying 3" x 1" wedged horizontally in the cladding to form a natural curve and nailed from each side. After a few days a 3/4" hole had to be drilled through the hog to prevent the formation of a swimming pool. The 'transom' is 3" wide and the bow radiused in plaster conveniently using a scaffold pole.

Early that summer a ton of factory offcuts of glass matting arrived in a wire cage. It was a strange animal, when a crow bar was used to raise one corner, the rest of the 8 x 8 ft. remained firmly adhered to the back of the lorry. In the end, the cage was lassoed and many ends attached to unsuspecting gate posts. With a cloud of exhaust followed by an earth tremour the lorry drove away. The driver was happy, but now the problem was stuck to the ground!

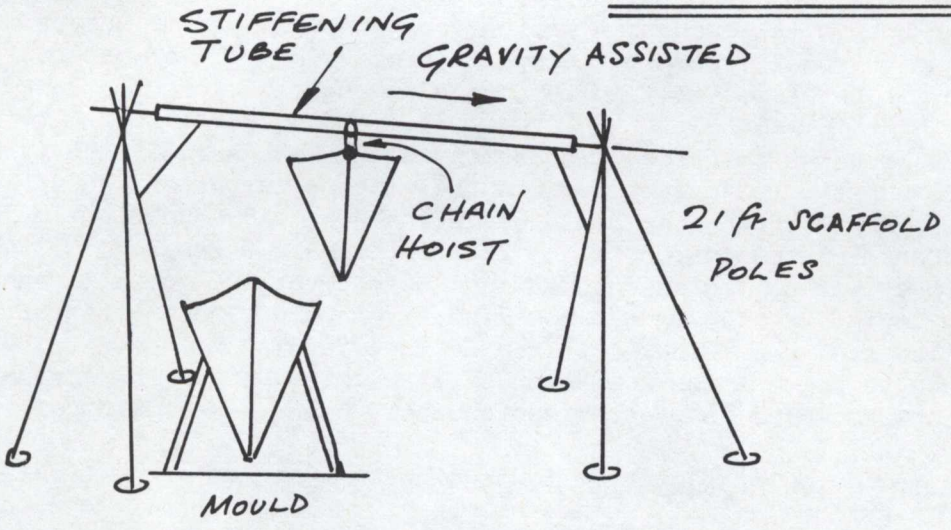
Coloured gel coat had been painted on (2 coats) above the water line and clear below in the waxed mould. Eventually laying up started. From a scaffold board walk around the sides one could peer into the chasm, the small glass rolls were tossed over the gunwhales and allowed to roll onto the hog, the ends cut to length and resin poured in by the gallon, to be quickly rolled and consolidated. Each step was progressed by a half width until all the mould was covered.

The G.R.P. was layered and tapered until 5/16" - 3/8" at the gunwhales emerged into a ½" or so at the water line and below. The port holes and a 'go-fast' stripe were moulded in and the four bulkheads glassed in situ to maintain 'some' shape at lift off. The bulkheads were moulded on the garage floor in the wet days during the summer. From gel coat to bulkheads took seven weeks per hull, plus three or four to fill cracks and polish the mould.

An aluminium scaffold pole was glassed in the bow and 3" x 3" oak in the stern for local reinforcement. Similarly two thicknesses of 2" timber were glassed into the hog with all the waste glass pieces and liberal quantities of resin.

Then we got to the half way mark. To allow the stickyness to wear off (we were by now immune to the itchy glass strands), a natural break came when the port hull had to make way for the starboard one, and without damage. The most intense operation of the whole project was raising the first hull from the mould. Two chain hoists, and four pyramids of three scaffold poles each were needed (21 ft. each) to get the vertical height and the horizontal swing necessary to clear the mould.

"NICK OF TIME"



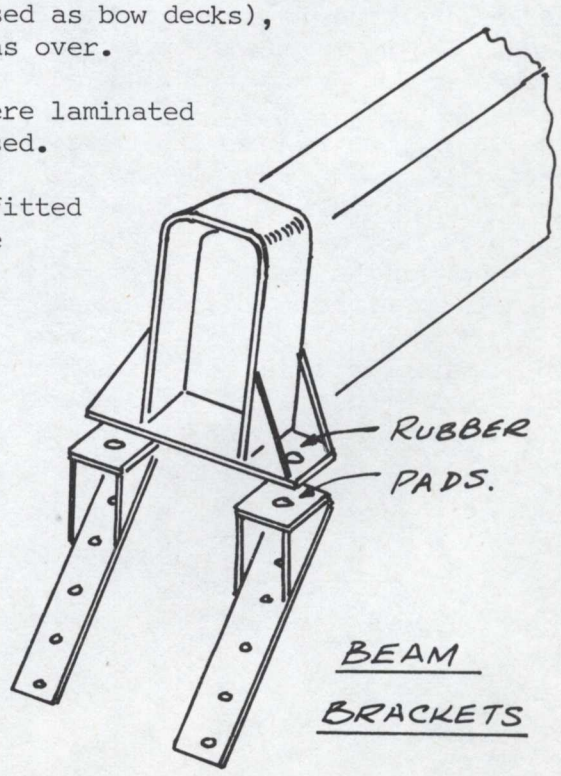
METHOD OF REMOVING PORT HULL FROM MOULD.

Time rolled by and towards October the starboard hull was finished. It was a pleasure to rip the mould away (later to be used as bow decks), denoting symbolically that the sticky stage was over.

During the following winter, the main beams were laminated and all the brackets manufactured and galvanised.

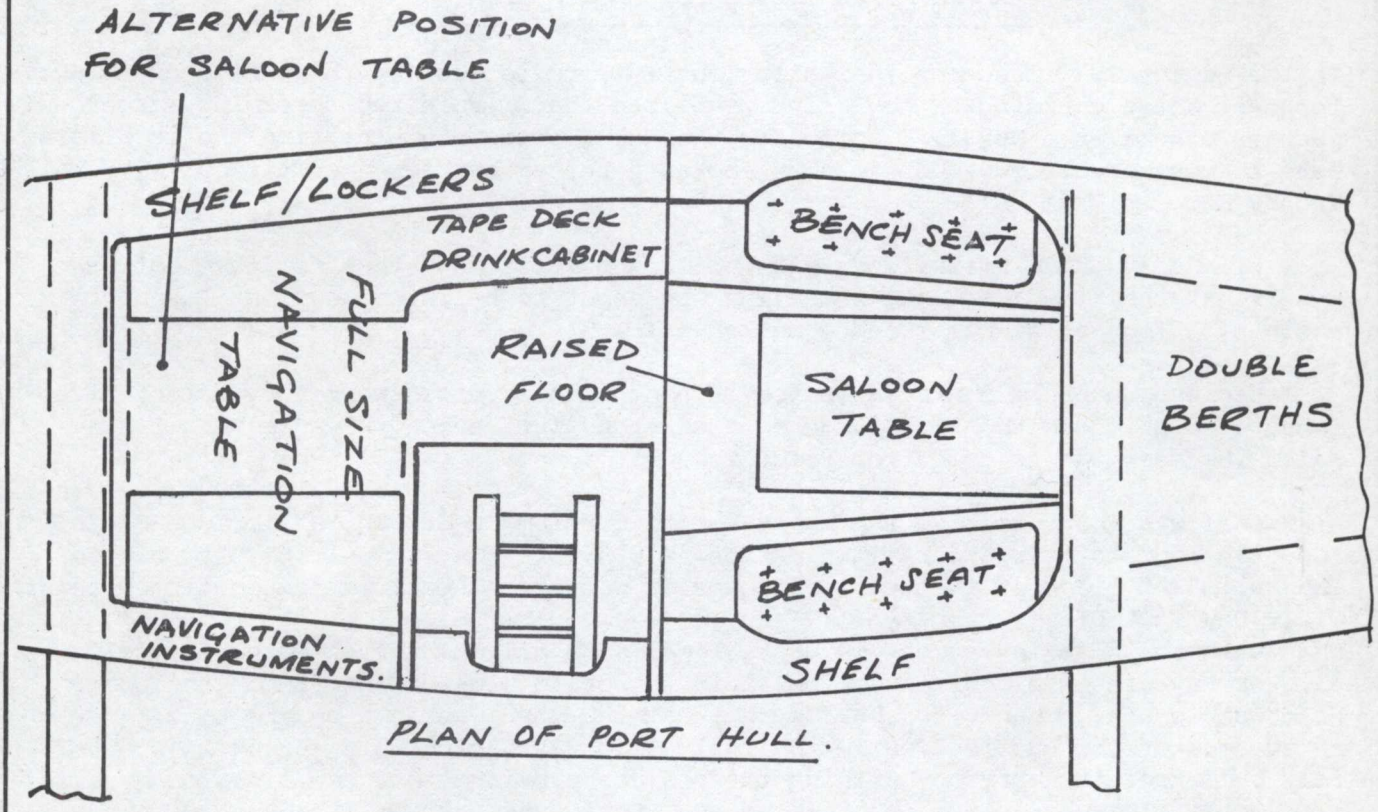
In the summer of '74, the quarter decks were fitted and the cabins made, plus all the hatches. The following winter, the interior was completed and the summer of '75 saw off the masts and rigging, rudders and engine.

The quarter deck beams were glassed in and the decks covered with 24 oz. glass roving to provide a good watertight and non-slip finish. A teak capping section was copper clenched entirely around the hulls to give finish to the gunwhales, and as an attachment point for the full width cabins. With only 3-5 inch bulwarks and raised quarter decks there is room to insert the beams through holes cut in the hulls. They have neoprene gaskets to keep the water out.

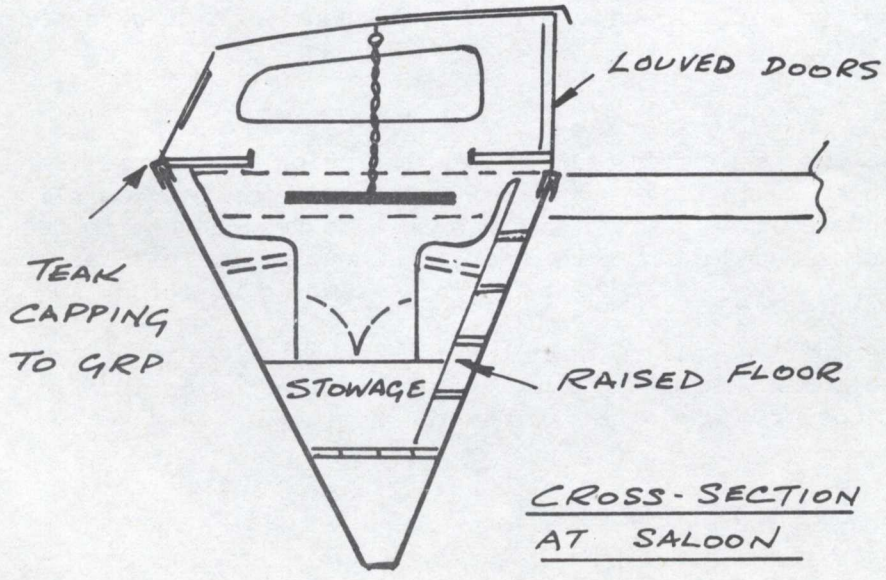


The maximum sail area without the squaresail is 960 sq. ft.; the boat is bermudan ketch rigged. The masts are aluminium, the main mast being an 8½" x 5¼" section 41 ft. long, while the mizzen one has a 6¼" x 4¼" section and is 34 ft. long. Both are mounted in tabernacles in twin "1" beams. The twin beams are boxed in at the base ends to provide storage for deck gear.

Water tight bulkheads are fitted about 7 ft. from each end and are fitted with flush hatches, a full size bicycle drops into the stern hatches. The port hull is a saloon/navigation cabin. The raised floor of the saloon permits 4 to sit round a table and view the outside world. The table duals as part of the navigation set up when under way. Under the raised floor is useful additional stowage.

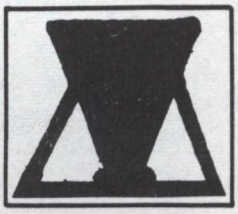


PLAN OF PORT HULL.



CROSS-SECTION AT SALOON

"NICK OF TIME" continued.....



The starboard cabin is a galley/dinette with an 8 ft. worktop outboard, a folding seat and a table and sink unit inboard. Three cosy doubles or luxurious single berths in the ends and a heads/shower in the fourth corner completes the picture.

For the statistically minded, each hull required 1200 lb. of resin and about 700 lb. of chopped strand matt. The weights used were various as would be expected form a job lot and built up accordingly to the final specified thickness. At the time of purchasing materials (early 1973) it was the cheapest method of producing the 2 hulls and cabin superstructures at £500, and hopefully will be the most enduring.

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WHY IT WASNT A TANE AND WHAT HAPPENED by John Clark.

In the winter 1973 issue of the Sailorman, I tried to justify the choice of a Tane for East Coast cruising. I have since realised that I required something larger, such as a Raka or a Narai. I opted for the Raka, because at the time the materials were to cost about £800-900. It also looked a better bet for the Multihull Crystal Trophy Race.

I planned to have Stalbridge Boats build the hulls, and then fit them out myself. At the time 10% Value Added Tax was about to be introduced, so I bought engines, a loo, bilge pumps and a cooker.

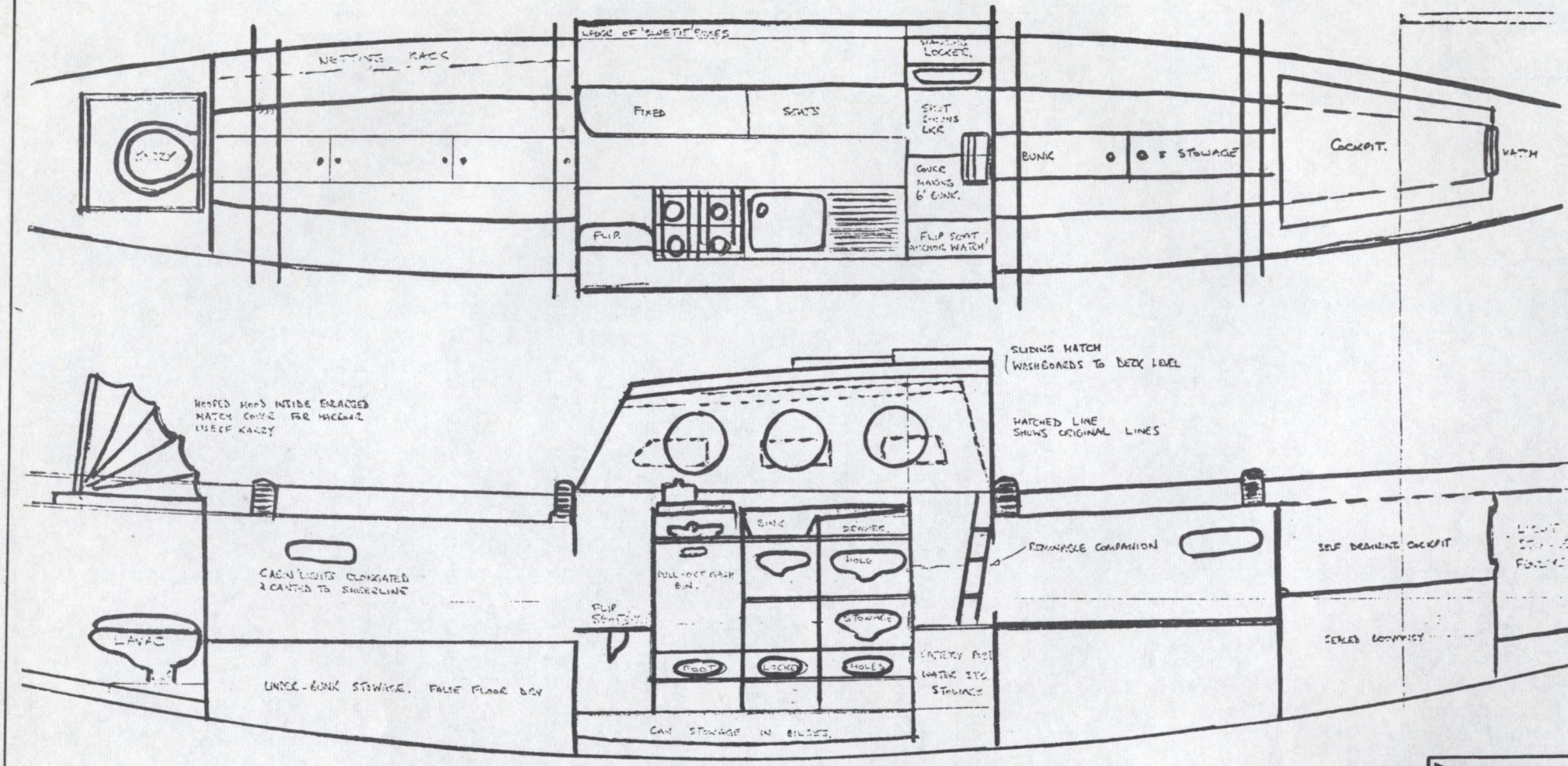
I decided on Bruce Banks sails for my boat as his prices were very competitive. I had also sailed with him. I ordered a stretchy luff genoa, a yankee and a staysail. The mast was to come from Proctors.

When I was about to move the hulls out to Burnham-On-Crouch, Stalbridge Boats suddenly went into voluntary liquidation. I was told that I would have to bid for the hulls and a lot of the gear, although it was mine! Legal advice confirmed this.. .....'Daylight bloody robbery'.
What with the huge investment in gear, I was in a dilemma as to whether to sell it all, or buy either a Contessa or an Albin 27, or to plug on and finish the boat. Fate was to play a hand, for half my gear at the yard was sold by the Liquidator in advance of the auction, while the rest of it was stolen in a 'break-in'. But I felt committed to carry on building the boat as a bridge to a new life, as my wife had completely surprised me by running off. So at the auction I bought two open hulls, marine ply, timber, glue and bolts. I hired a local haulage contractor and a crane to have the hulls loaded. This was all done with grest expertise. This load was all taken to London.

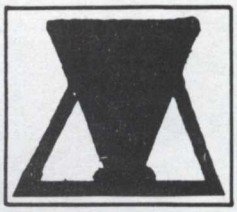
Part 11

In August 1974, two beautifully sheathed white nylon hulls were transported to Burnham-On-Crouch looking like a pair of Brobingriagian bedroom slippers waiting for a giant Cinderella. For a song, I was able to rent a shed to deck the hulls before the Dragons and Solings came back for the winter. This was a particularly arduous task because the hulls were not in a standing position.

By the summer of '74, all my calculations began to be hit by rampant inflation, and the Married Women's Property Act. Timber had quadrupled in price since 1972, while the mast cost two and a half times the estimate.


NETTING RACK
LEDGE OF 'SWEETIE' BOXES
LOCKER.
FIXED
SEATS
SEAT LIFTING LKR
BUNK
STOWAGE
COCKPIT.
HATCH
KAZZY
COVER MAKING 6' BUNK.
FLIP
FLIP SEAT ANCHOR WATCH
SLIDING HATCH WASHBOARDS TO DECK LEVEL
HATCHED LINE SHOWS ORIGINAL LINES
HOOPED HOOD INSIDE ENLARGED HATCH COVER FOR HANDLE USE OF KAZZY
REMOVABLE COMPANION
SELF DRAINING COCKPIT
SINK
DRAWER.
HOLD
CABIN LIGHTS ELONGATED & CANTED TO SHEERLINE
BULL-DOG GAIN B.N.
FLIP SEAT
STOWAGE
FOOT
LOCKER
HOLES
LAVAC
UNDER-BUNK STOWAGE. FALSE FLOOR D&V
CAN STOWAGE IN BILGES.

RAKA-NGORA.



Now I understand why PCA builders scour the demolition sites for bannisters, flagpoles and knicker elastic. I wanted my Raka to be the best ever built. However the cost of cascover and resin had risen so much, that to sheath the decks would have cost double the original bill for both hulls. So instead the decks were covered in a thin fibreglass scrim to add stiffness without weight. It was waterproof and a cheaper alternative.

Modifications.

1. The coach roof was raised six to ten inches and included a forward slope. This did add a bit of extra windage. The portholes are of toughened glass, as are the oval ports in the hulls.

2. The main hatchway has been built in the conventional fore and aft position. It should be drier and give better access from the cockpit. As a result of the hatchway system, the after bunks are shorter. But there is an extension which acts as a bosuns box, a step down into the hull, an anchor watch seat and a galley working surface.

3. Self draining cockpits were made for preference, but I had to sacrifice some stowage space. But I could change back as per plans if necessary. I could not extend the after bunk into a foot locker or 'trotter box', as the cockpit sole was too low where the keels rise to the skegs. One after bunk stows a lot of gear on bread trays on runners. This is very convenient in the galley hull.

4. The starboard forward hatch was moved forward by three feet, so that from a kneeling position on deck any sail bag or warp could be reached from where it was stowed. The hatch is almost flush mounted with rebated seals. The port hull houses the heads. I have chosen the Lavac vacuum pump having suffered from stopcockitis on all other forms. Besides, anything tested with 56 lb. of green bananas has got to be good! The hatchway here has been enlarged and a concertina pram hood fitted for those moments of meditation is crowded moorings. "Bucket and chuckit" is all very well for the lads, but to attract ladies afloat one must offer certain amenities.

An open fronted shed with a leaky roof and summer gales made work very difficult. The hulls had to be baled out all the time. Later I cut limber holes in the bulkheads to help drain the water while syphoning it out. By October (1974) I had moved to the lee of the yard where I had access to power points. Here I had to buy a tarpaulin to cover the boat while outside. I now pressed on with the work with the indefatigable help of a first rate first mate who painted and varnished quicker than I could build or sand.

The winter was far too cold to work in the open, so we returned again at Easter. In the meantime, I bought a beautiful fully battened mainsail from Sadlers of Burnham, a firm who used to make barge sails. I strongly recommend this loft to all PCA members. A spare set of planed battened cost £7 !

It was with light heart and heavy trousers that I took off the covers at Easter. The rain had blown into the ventilators in the stern cover, with the result that the bilges were bright green and unvarnished ply laminations had split e.g. those limber holes. From then on work was uphill. The tarpaulin was re-erected with a frame, but took off twice in a squall and dumped the rain water in the cockpit. All the timber that was bought at the auction had long since gone and much more besides, including one load which caved in the car roof when I hit a pothole.

The yard assisted in making four mahogany beams, while I continued work in the chartroom and galley.

We then painted the deckhead white, the beams were varnished, the hulls were painted white with blue non-slip decks and cabin top. This was done prematurely to make sure that the proportions of the raised coach roof were right.

The introduction of 25% VAT meant another frenzy of buying items such as screws, primer, shackles, navigation lights and bunk cushions. I sympathise with Martin Lowe and his Narai as I now have exceeded £6,700 including all items such as berthing, transport and insurance on RAKA NGORA, which when planned in 1973 was to be afloat for less than £3000 when a Contessa cost £4200.

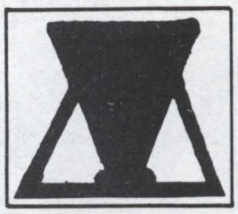
Beams 1 and 2 were built up with four extra laminations. The blacksmith in the meantime was late with beam fittings. The lag screws I had, had since disappeared. The beam fittings cost £75 while the lag screws, all 192 of them cost 8p each from an old fashioned ironmonger I found.

Having considered various aspects of beam fittings, I also had a few thoughts on rigging. I went to see George Payne on a very amiable weekend charter which proved its value for ideas. The hulls are cross braced on RAKA instead of using chocks on the beams. One brilliant idea that could apply to all Wharram designs is the 'beakhead' to the forestay cantilevered from the main beams 1 and 2 and guyed to the bows. This provides a safe access to the forestays and a fixt point to use a downhaul. George solved some staying problems by having the inners and lowers on the same chainplate on the inner side of the hulls, with cap shrouds to eyebolts on the beam. Twin backstays are used. Will shrouds on to the outer hull chainplates foul a yankee close hauled, or inners to the inner side of the hull foul the staysail on a reach? George's solution was adequate for his shorter 'J' measurement and he didn't set a ghoster. Although I felt accommodation was on the small side for the length of boat, at least I will be getting performance for my money. Raka is a splendid example of Wharram concepts and I can recommend to any potential builder or one like me whose spirits were flagging, to take a weekend charter for a real shot in the arm.

What is beautiful is the lack of fuss in achieving performance. Joyce not only cooked a stew, but we also kept it down and stayed dry shod during a splendid wind against tide beat with quite a lumpy sea running. Broad reaching was fun in the brisk breeze. Joy was unconfined on the evening of the first day when in a northerly force 4, we romped past an Iroquois with two huge rooster tails rising from her sterns, whereas we had very little disturbance at all. George looked on the gloomy side as he knew the owner concerned who was going to have something to say about his yardstick. Marion took the helm for a lot of the second day, and she too is convinced of the advantages of a catamaran.

Back on my own boat - some of the beam brackets had to be remade by the blacksmith because of being the wrong length. The boat had got to a stage that there was so much of it finished that it needed some maintenance. Completion of the boat included engine mountings and rigging.

RAKA NGORA'S appointment with the salt water was earlier this year at a cost of £7500.



THE FURTHER PROGRESS OF KAUAMEA (Tangaroa)

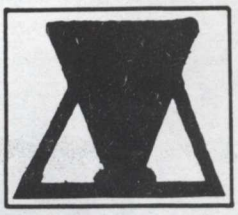
by George Snyder, Seattle, Washington, USA.

With enough savings to last three or four months I have quit my job to devote full time for the completion of KAUAMEA. At this point I am installing furniture and cabin roof for the two centre cabins. Except for this the hulls are complete inside and out, all decked and entirely encased in fibreglass and epoxy. The hatches are complete. All hardware and material for completion is in my basement.

As for rig (which was the hardest decision for me to make) I have decided to go for what I call a Chinese Junk Sloop. Again using my model as a testing unit I tried the rig and it looks like it will work. For a mast I have a young Douglas Fir tree 30' long which has been air drying in my back yard since April 1975. I sealed the ends of the log with epoxy glue to prevent cracking. The Chinese use a Tung sap for this and they bury their masts in the earth for a year. I didn't want to dig that big a trench, and I still don't know what they gain by doing this. Does anybody? Since my local hardware store didn't carry Tung sap I elected to use epoxy glue. It must work because there is very little cracking. It's a beautiful mast.

I am making all the rigging myself, sewing the sails on a home zig-zag sewing machine, making all my own blocks, deadeyes, cleats, etc. The mainsail is going to be 4 oz. nylon, while the jib and No.1 genoa will be 5 oz. dacron (terylene). Although I have all the material I think I would like to have a light wind drifter of about $\frac{3}{4}$ oz. nylon. This could be made from a parachute, if I could find one somewhere.

Reading how others have problems bringing polycats through the wind on a tack, and reading complaints about leeway when on the wind makes me wonder about centre-boards. I could not live with that hole in the bottom like KISKADEE. Like Peter Tangvald I refuse to have <u>any</u> openings below the waterline. But the question of leeway and windward ability has more to do with the individual and his (or her) vessel than with design. Will KAUAMEA tack through the wind good enough <u>for me?</u> Will her leeway be acceptable <u>to me?</u> I think so. Wandering most of my life has made me very adaptable to my environment. But in playing the game "what if?" I ask myself suppose I'm not satisfied? Suppose I can't live with the Junk Sloop rig and the leeway is too much for me. Then I have to further suppose I've just been left a few thousand dollars with nothing to spend it on. Well, the mast aft rig has always intrigued me. I think I would go with that, meaning the one with the small mizzen. A sailmaker would have to provide the sails because making them is not like making a Junk sail. And there would have to be roller reefing or furling gear for the head sails, and winches, because KAUAMEA will have no winches with the Junk rig. For leeway instead of punching holes in the hulls for centreboards, or tacking on fin keels, I think I would go to the lee boards, similar to what the Dutch use, or like the old-timey east coast sharpies. These boards could be fastened to swing up under the centre platform almost out of sight for those who think such boards are ugly. You couldn't use them both at the same time, just use one depending on which tack you're on. I think the idea would work. Has anyone tried it?



But what would be gained by such expense? An ability to sail two to five degrees closer to the wind? This may be important to a racer with close competition, but how important is it to a cruising vessel? It is a gain of less than ten per cent, and at such a cost. How bad does a rig have to be not to function at all? Has anyone seen a rig so bad that it didn't work at all? I never have. So if it came down to it, I would have to say to myself that with this few thousand dollars and my Junk sloop, where in the world could I cruise? And for how long? Then that experience would have to be weighed against the two to five degrees gain in windward ability. Which would you choose?

Well, folk, I must be getting soft as I approach age 40. Having seen several examples of the WEST system (wood-epoxy-sandwich-technique) I am mildly impressed. I am not convinced that it has the strength of fibreglass, but the system is fairly easy to use and it looks nice. I even tried it myself. No, not on KAUAMEA. I bought these two cheap (less than a dollar) polystyrene ice chests. I coated them inside and out with epoxy resin then painted them a flat white. From a pair of old boots I made some leather hinges, and the lids are held down with stretch cord. On a recent car trip to Southern California and back (arranging for a slip for KAUMEA in the Fall of 1977) the ice chests held ice very well. So the system was a success. Since this was a polystyrene-epoxy-sandwich-technique, I call it the PEST system.

By the way, Southern California must have the most beautiful women in the world. While down there I fell in love about four times a day.

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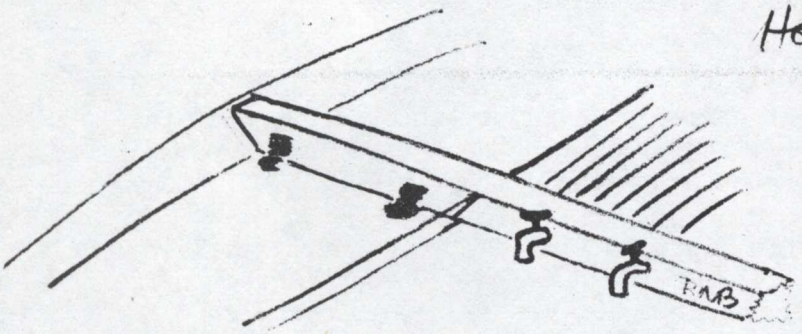

Hollow steel beams, eh? No wonder you like boozing and cruising!

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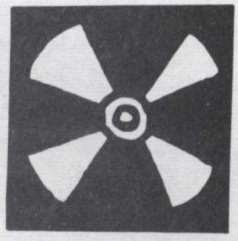
DEVONIAN ORO.

Len and Margaret Benstead write from Plymouth, Devon, to say that they have at last started building, but find it hard going for a husband and wife team. They feel it will be well worth while in the end.

"We are completing one hull at a time. Bulkheads and keel were fabricated at home, and will be completed on site, which we have to rent." Hopefully the first hull will by now have been turned over ready for fitting out over the winter. The cat has been epoxy sheathed below the water line, with a standard paint system above. Plywood is 9mm Kaya marine, with 12mm ply for bulkheads and keel. Len did say that he had a bit of a problem marking out the keel in a 9' x 15' room.

Keep going - it will be worth while in the end. Ed.



Engines

A solution or two to the engine problem from Narai sailors.

The installation on Narai 'MARA NOKA' by Brian Priest, Brham, Wetherby.

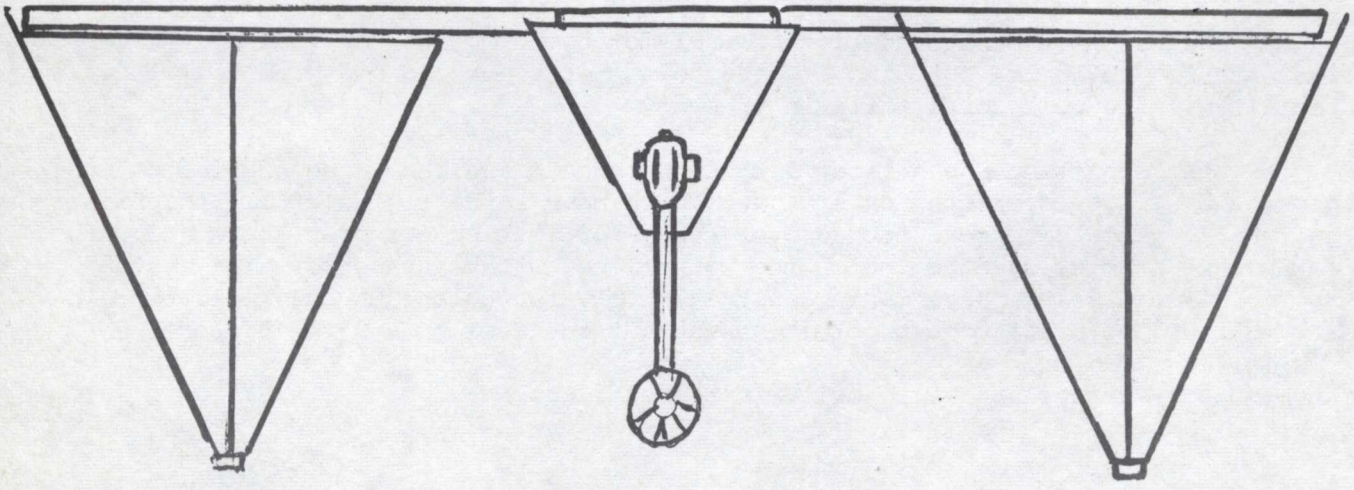
Five years ago, When Brian Turner and I started building MARA NOKA, we spent many hours trying to evolve what we believed would be the ultimate in reliable and efficient engine installations in the Narai's.

Our situation was a little different to the general image of PCA builders in that we had no immediate plans for ocean cruising due to family circumstances. We faced the fact that for some time to come we would be 'weekend sailors' and would be based at Whitby and limited to the North Sea with all its problems of difficult harbour entrances, confined moorings and notorious weather. Because of this, we deemed that a good diesel engine was essential for our particular circumstances.

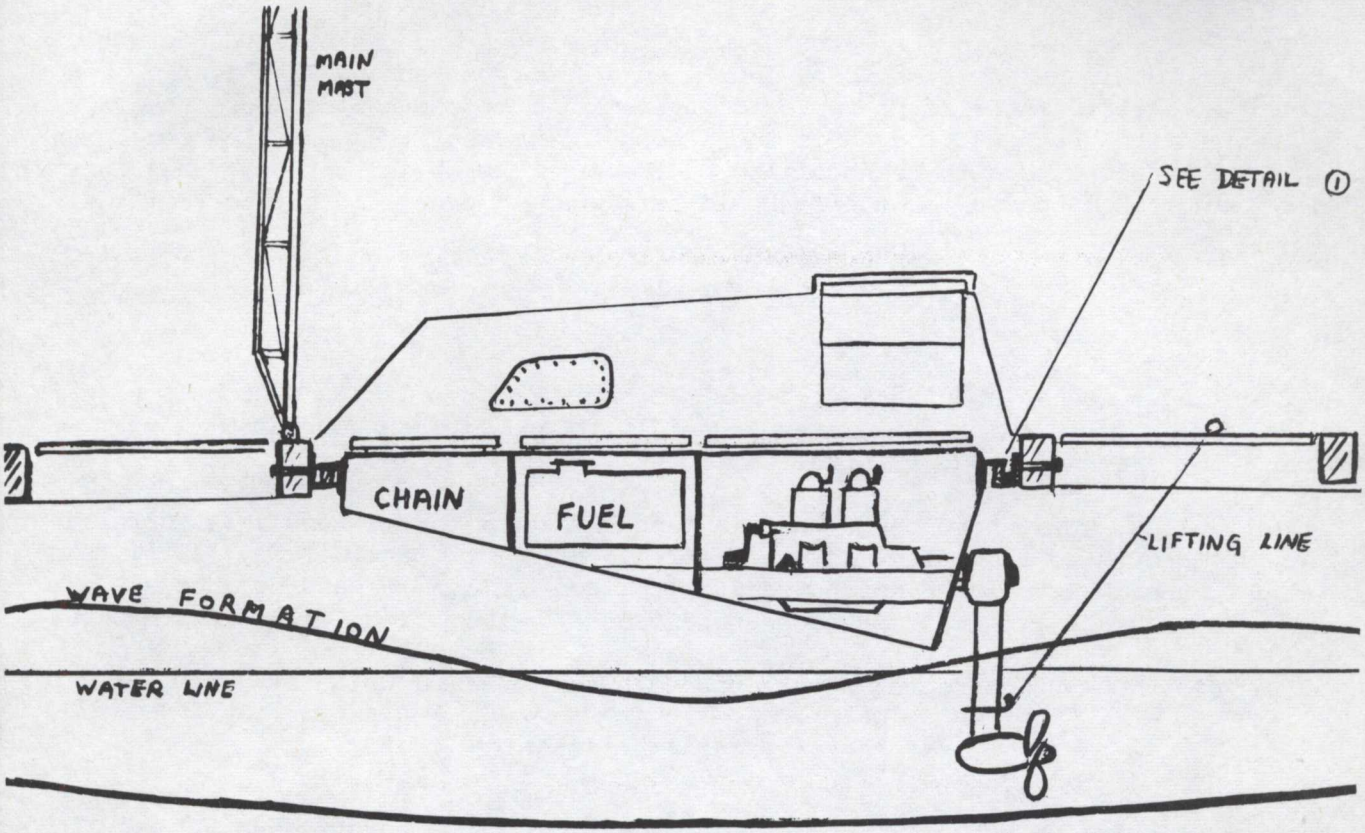
Initially we played about with the idea of twin hydraulic drives from a central engine, but the design problems involved in fitting them to a Wharram hull were too great to overcome at the stage of building that we had reached (both hulls planked).

It wasn't until two years later at the boat show that we found our answer already fitted to a Prout Snowgoose. This was the Volvo Penta MD2 (25 hp) with extended outdrive. We ordered the engine immediately in order to beat the introduction of VAT in the coming April and also arranged trade terms, which is well worth going to some trouble over on such a large item.

Now we had to design a suitable installation. What eventually evolved from the drawing board was a V section nacelle below deck level, constructed on the same principle as the hulls but using much heavier materials. This included substantial built-in engine bearers.

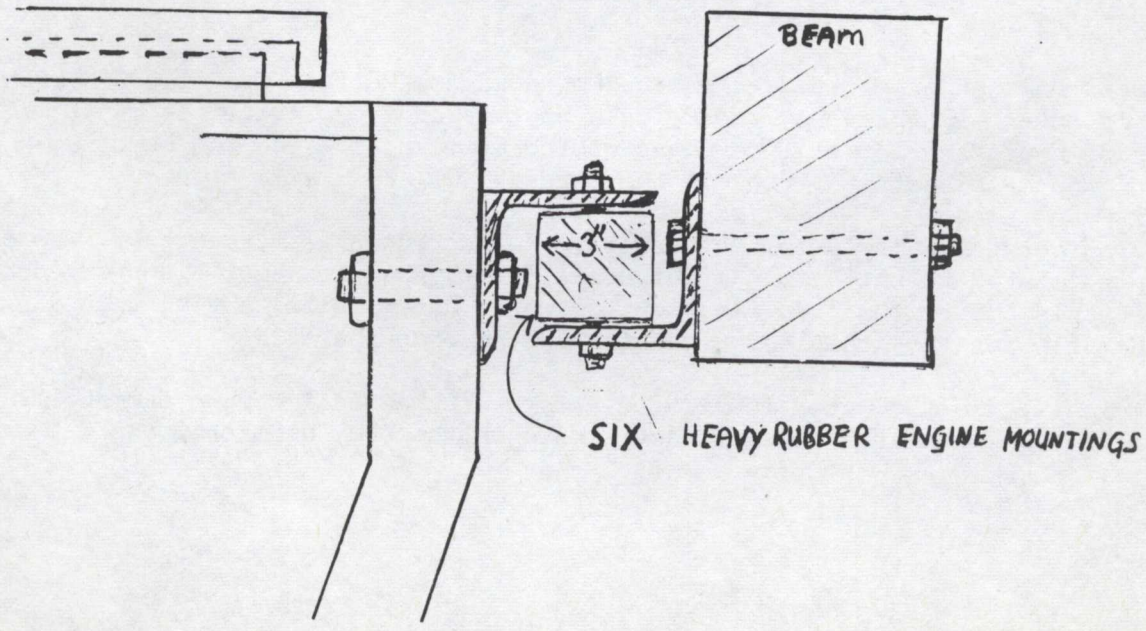


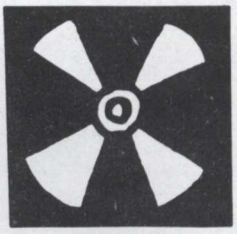
As the sketch below shows, the nacelle is divided into three compartments. The engine is in the stern, a twenty gallon fuel tank is contained in the mid section, with a chain locker at the forward end.



The whole nacelle is mounted on twelve heavy rubber engine bearers, six at each end. These in turn are attached to the two centre beams by means of heavy section steel angle plates bolted through.

DETAIL ①





At the stern the nacelle is just clear of the water line, but tapers up to the underside of the beam at the forward end. The large hatch tops form flush decks. Engine controls and instruments are taken remotely to the port hand steering locker.

PERFORMANCE

MARA NOKA has been in the water now for two seasons and has behaved perfectly under both sail and power. More by luck than design, the engine installation has proved excellent. There is no vibration transmitted to the hulls, nor is there any cavitation whatsoever, even in the steepest seas that the North Sea can throw up. This is mainly due to the position of the propeller being not only deep, but also being positioned under the rear mid beam where the wave formation from the bow waves are at their highest.

Slamming is very slight and is of little consequence. Certainly, it has given us no cause for concern.

Cruising speed is about 5 knots. Fuel consumption is a little over half a gallon an hour. Consumption increases rapidly to a gallon an hour at 6 knots, with a top speed of about 7 knots.

Reliability and endurance go hand in hand with most diesels and this installation has proved no exception. As an example, last Spring Bank Holiday (1975), she brought us back across the North Sea from Imuiden to Grimsby heading into a northerly force 6-7, non stop at an average of 4.5 knots. (184 miles in 41 hours.)

Brian Priest can be contacted at: 3 Prospect Bank, Braham, Wetherby.

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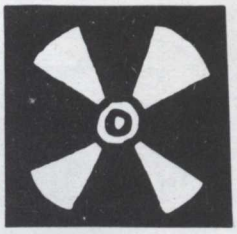
The installation on Narai NICK OF TIME by Jeff Fallon of Havant, Hants.

The basic engine is an unmarinised 700cc OHV Reliant of 120 lbs. weight and giving 25 hp. This has an air cooled totally enclosed water system as per normal car, but with a radiator from a 2 litre car (this was just adequate during this last hot summer). This is housed between beams 2 and 3 along with battery voltage regulator, solenoid, fuses etc. A flap at the front of the engine housing is opened when running the engine to permit air flow while the flap at the back gains access to the gear stick. The clutch is operated externally via a 2:1 rope and block system. On my boat the hot air warms your feet in the cockpit immediately aft.

The gear box has a replaced tail bearing. A Ransom Hoffman Q J205 LOC DUPLEX bearing is interchangable. But the calculated life of the original is many hundreds of hours and I feel I may have wasted my time. The bearing needs a spacer on the main shaft to transmit the thrust.

The prop shaft is an aluminium scaffold pole, acting as a torque tube. The gear box is pin jointed to the original universal joint. The prop end is supported by a bridal (this hoists the prop clear of the water under sail.) A yoke with a PTFE bearing holds the stainless extension to the prop shaft.

I originally had two water lubricated PTFE bearings hanging down from beams 3 and 4, but these wore at such a fantastic rate on the aluminium prop shaft that



they were quickly heaved over the side. The bearings were to prevent wobble and lift.

The 13 ft. long shaft does not wobble within the working RPM and lift is prevented at speed by vanes directed downwards bolted to the bridle. At low speed in forward and reverse the weight of the prop and bridle is sufficient to hold it down. Effort produced by the vanes is proportional to speed - just as required and just where required.

The 15" dia. x 12" pitch left hand propeller was chosen to run in 2nd gear which gives a reduction of $2\frac{1}{2}$:1. At 1000 RPM prop speed, the engine uses 17-18 hp. of the 27 available. More revs are needed in reverse, but at least it works and is steerable. Third gear is useful for motor sailing and in top gear one can 'bump start' the engine above 6 knots (useful if the battery is slow).

This engine pushes a heavy Narai at $8\frac{1}{2}$ knots. At $4\frac{1}{2}$ knots, fuel consumption is just under 3 pints an hour of petrol. It is a simple and rugged system with nothing to wear out quickly. After two 60 mile motors across the English Channel and 1500 miles of cruising through the Channel Islands and Brittany, no impending failures are apparent. Being of low compression and light, the all aluminium engine, if painted is ideal for cats, and with the water system as described, installation trials and battery charging can be carried out when afloat. Slight cavitation is apparent in heavy seas with the pitching, but 6 knots can be maintained against a force 6 wind, even when the wave length is reduced as in a harbour entrance.

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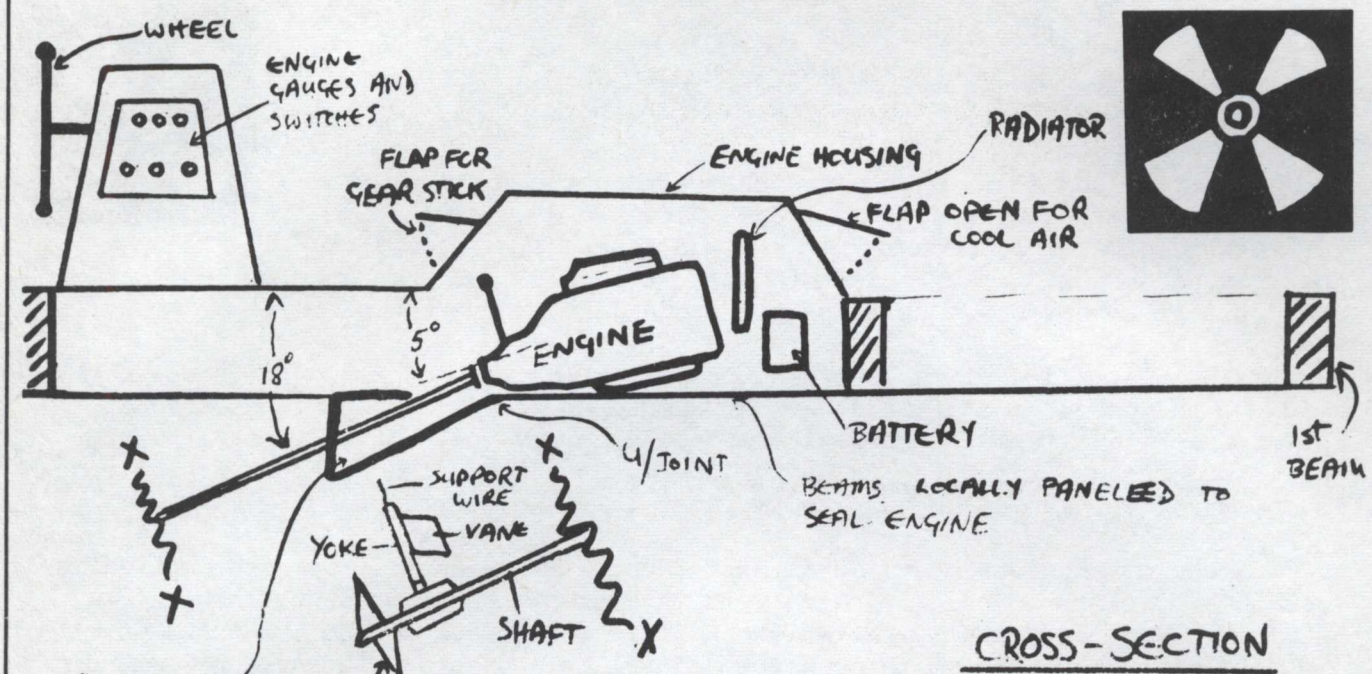
Hydraulic installations for catamarans

Arne Baartz of 1527 Clive Drive, Victoria, BC, Canada, has passed on some interesting information with regard to hydraulic power. Arne says that a certain Mr. George Wolff of Seattle, a hydraulics engineer by profession, has developed a system and is willing to give personal advice on its installation for any particular boat.

George Wolff uses one pump on the engine and two motors, one for each hull. The engine and pump can be mounted wherever desired. The motors, complete with thrust bearing, can drive conventional through hull props, or otherwise they can be mounted on outdrive legs on the side of each hull and support the props directly. A valve controls the amount of power that goes to each prop. Engine power can be split from 90-10 to 10-90 per cent. This should give manouvreability under power, which Polycats lack. One system goes up to 30 hp. while another goes up to 50 hp.

Arne goes on to say that he is using one of these systems with a Lister 18 hp. diesel, using outdrive legs on each hull (you forgot to include your sketch, Arne!), and will be informing us of his progress with it.

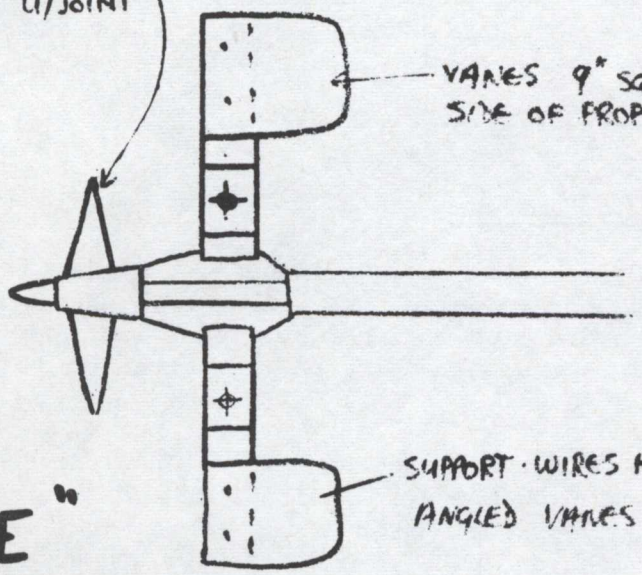
Further information on this system can be obtained from Spencer Fluid Power, 8410 Dallas Avenue South, Seattle, Washington 98108.



CROSS-SECTION

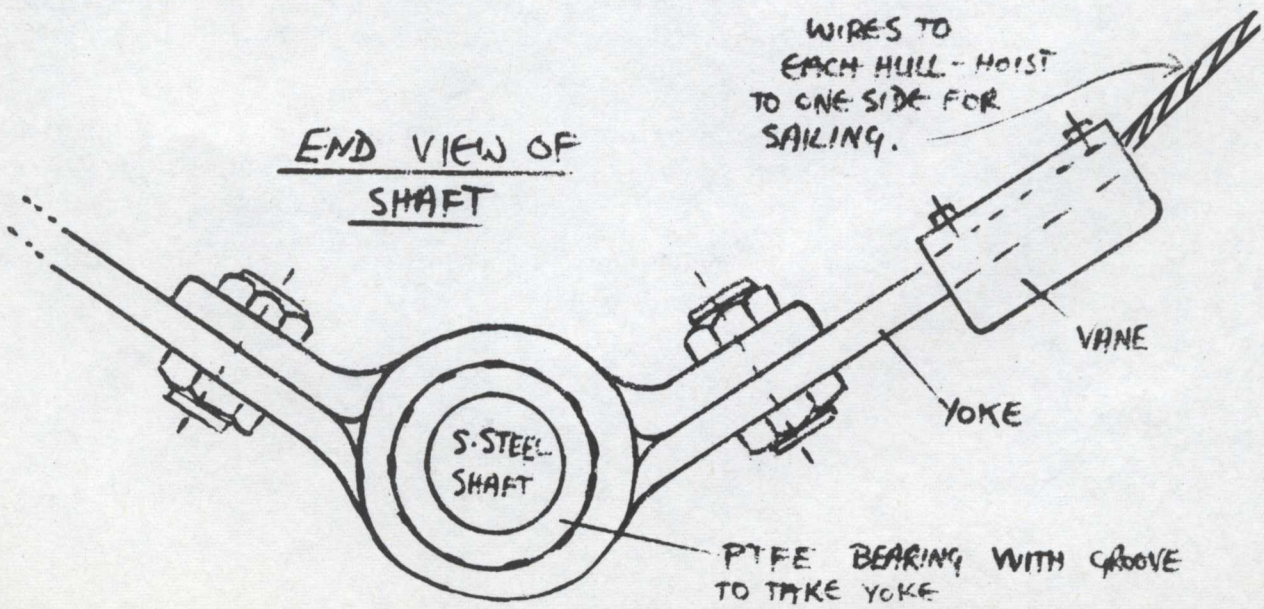
"V" SECTIONED SNOOT TO DEFLECT WATER FROM U/JOINT

15" DIA x 12" PITCH LEFT HAND PROP

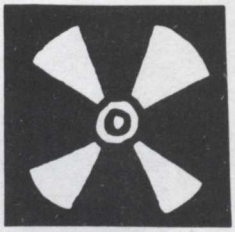


PLAN VIEW OF YOKE

"NICK OF TIME"



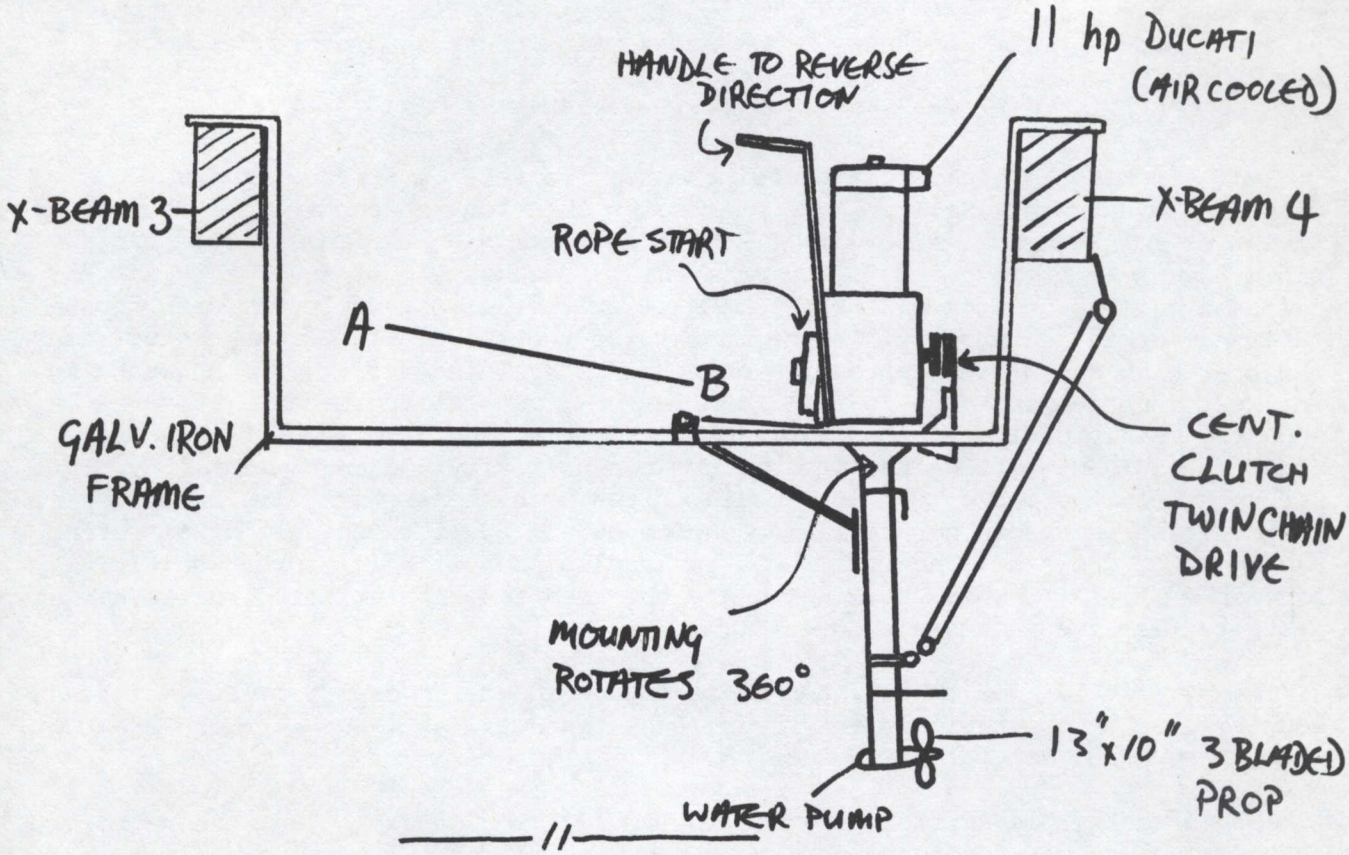
END VIEW OF SHAFT

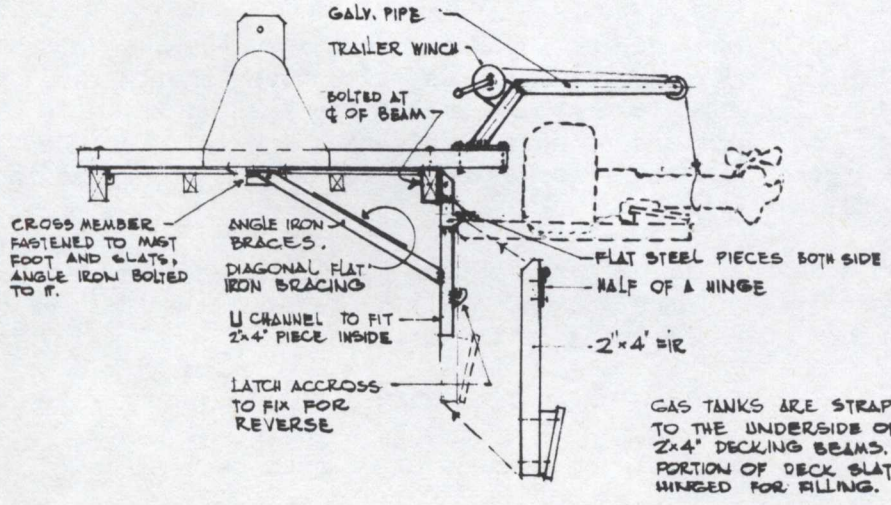


The installation on Narai SHIRAZ by Ken Lawson, Pymble, NSW, Australia.

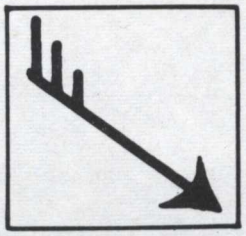
Description

Speed with Ducatti 11 hp. - 6 knots with 2/3 throttle. (Original engine was a 14 hp. twin enfield that gave 8 knots, but I prefer a diesel). Enfield o/b leg (alloy ex army) 13" x 10" prop with 2-1 reduction in leg. Air colled Ducatti 11 hp. with centrifugal clutch. Twin chain drive rotates through 360 degrees (f/n/r with clutch).
Engine is hoisted out by pulley for sailing at the line A-B. The exhaust is water cooled as the leg has a water pump.





George Matrahazy of Ottowa, Ontario, Canada, sent in the sketch of the outboard system used on his Narai. So far it has proved satisfactory, including a 800 mile maiden voyage. However the prop does come out of choppy water, and the engine gets splashed in larger waves.



Self Steering

by Tom Herbert.

In October 1975 issue of the SAILORMAN, Richard our Hon. Editor summarised the self steering situation. Realising that one of the AYRS members who had a hand in writing their book 'Self Steering' was also a Polycat enthusiast, he has asked me to continue the subject in this issue, preferably controversially, but relevant to multihulls and particularly Polycats. My experience of sailing Polycats is unfortuantely nil, so the fact that I will make all sorts of statements about Polycats based purley on theory and heresay will ensure controversy without really trying.

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Self steering is the art of inducing a boat to sail on a predetermined course relative to the wind. Sailors have been doing this for thousands of years without having to get technical about it. Traditional working boats from every ethnic group have been built for definite commercial reasons. Almost invariably these boats have to spend much of their time sailing themselves, while the crew pursue their commercial enterprise. The seamanship of the crew includes the control of the boat with the minimum attention while at work. Things started to go wrong in the West when people began to sail for pleasure, and sailing begat a leisure industry mainly dedicated to producing boats for racing. The industry has produced magnificent sailing machines of great sensitivity and maneouvrability. Unfortunately the market for work boats driven by sail has virtually disappeared. The cruising yachtsman has really no choice but to adapt these delightful racing machines for cruising. The virtues of the racing boat with it's great sensitivity becomes a liability when cruising, hence the need for sophisticated self steering gears to ease the yachtsmans lot.

The Polycat is a multihull, and basically designed for cruising. It is not as sensitive or maneouvrable as the racing type monohull. As I see it there are two ways to approach Polycat self steering.

1. Assume that it is sufficiently similar to a racing monohull that the self steering devices developed for the monohull will work.

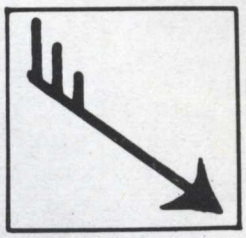
2. Assume that as a cruising vessel with the necessary characteristics it can be made to self steer safely by exercising good seamanship.

From my armchair, I have sailed on many daring voyages to exotic places. Although acceptable solutions have been obtained by both methods, I conclude that method (1) is not for me. The multihull, apart from some cosmetic similarity, is completely different from the monohull and to pursue this approach is to delude oneself. Mind you, there are some valuable lessons to be learnt from understanding why the monohull methods work on the monohull.

The second approach I am sure will produce far better results for Polycat skippers. But let us see what we can learn from monohull sailors. The self steering design method evolved for monos goes something like this.

1) Examine the helmsmans duties carefully and analyse what his job is.

2) Delegate as many of his jobs as possible to someone else, such as keeping a lookout.



3) Having simplified his job as much as possible, try and decide what his main contribution to the success of the mission is.

4) Having isolated the very essence of the job, design a mechanical device to do this simple but vital task.

5) Get this brainstorm fabricated and able to work in conditions that you expect to self steer in.

6) Reorganise the work schedule of the crew to cater for self steered cruising.

Items 1, 2, 3 are the most difficult to do properly, because to get an accurate assessment of the helmsmans job, you need to know a lot about a boat's behaviour. A sound knowledge of seamanship is also necessary. Items 4 and 5 require some mechanical skill and ingenuity, and a lot of patience to get your substitute helmsman working efficiently. Item 6 is a seamanship skill.

If you analyse the helmsman's job on a monohull, you may well conclude that the vital task of the helmsman is to sense and monitor the direction of the apparent wind, and make the necessary helm adjustments to keep the boat at a steady angle to it. Model yachtmen in the 1930's established the vane gear as THE method of doing this job mechanically when vane steered models swept the board at all the model yacht races both nationally and internationally. Cruising yachtmen started seriously adapting vane gears for full size yachts in the 1950's, and development has been pursued vigorously ever since.

The model yacht which inspired the invention of the vane gear is a slow speed monohull with a heavy energy absorbing keel. The inertia of the keel ensures that the model accelerates and slows down gently.

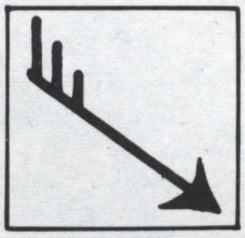
Its full size brother, the cruiser/racer yacht has a larger speed range, but again the inertia of its keel ensures gentle behaviour in acceleration. The problems of adapting the vane gear at full size have to get enough power from a small vane to work the boat's rudder, and then designing rudders and servo tabs that can handle the wider range of water speeds experienced by the full size boat.

If we look at the 'state of the art' of the vane gear design at full size, there are limitations to it's usefulness. These limitations are:-

a) The effectiveness of the vane gear tends to deteriorate as the yacht's water line length approaches and exceeds 40 ft. This is due to the increasing speed range of the boat causing increasing navigational errors when sailed in variable conditions.

b) There is a loss of effectiveness when boat speed regularly exceeds 8 knots. This is due to the rudders and servo tabs which are designed to be effective at low speeds being too large and difficult to control at high speeds.

c) Vane gears have difficulty in controlling boats that accelerate and decelerate violently, mainly the multihull which has low hull drag and low inertia. The problems here are the large fluctuations in apparent wind direction caused by rapid variations in boat speed.



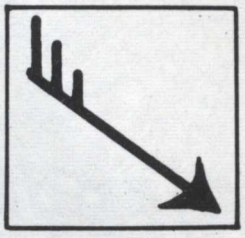
Unfortunately all these limitations seem to apply to Polycats unless they are deliberately sailed slowly and grossly overladen. Polycats and other multihulls are high speed rafts. Two or more long slim hulls are interconnected by a bridge structure to form a stable platform carrying a lot of sail. The absence of ballast means that the craft has low inertia and accelerates and slows down violently making it an embarassing form of transport when in confined waters. The helmsman has a tough time because the boat does not offer any obvious information on what it is going to do next. An analysis of the helmsmans job, so that we can eliminate him, seems fraught with difficulty.

Let us for a moment accept that the vane steering as practiced on the monohull is not the correct approach. Let us also accept that the Polycat is a different 'animal' and do as the monohull boys have done, by starting from the beginning and checking historic clues and then use the logical approach that has paid off for the monohull in the design of self steering.

The ancient method of self steering Polynesian rafts is covered in a number of nautical text books. The vital clues can be found in that best seller by Thor Heyerdahl, 'The Kon Tiki Expedition'. Thor and his companions, strangers to the sea and Polynesian rafts, struggled with a massive steering oar to try to keep their clumsy slow moving raft on course as it sailed away from the coast of South America. About half way across the Pacific, one of the pine planks that were thrust through the balsa raft logs worked loose. (Thor had faithfully copied the detail of the ancient drawings.) Pulling the dagger board out of its chink in the logs, the raft immediately changed course. Experimenting with the depth of immersion of the planks or dagger boards, Thor realised that the raft could be made to sail sedately on any course he required, even to windward. The steering oar was only needed to maneouvre the raft to meet awkward running seas when it lacked steerage way. Kon Tiki was a heavy displacement, slow speed, undercanvassed raft, and it would be foolish to assume that a Polycat would be completely controllable in the same way. Never the less, the Kon Tiki principle seems to me to be a more valid starting point for the effective control and self steering of a Polycat.

Western multihulls are hybrids, using western sail rigs and from bitter experience, not one stern rudder but often two, to try and keep things under control. I am not complaining. They do rather well, but it requires some nerve to undo all that just for the sake of furthering the cause of self steering. There is the consolation that the Polycat with its open bridge deck is ideal for trying the Kon Tiki principle without causing heart failure among fellow yachtsmen and bankruptcy to Polycat skippers.

One thing has slowed down the development of multihulls in the West, and that has been the hysterical reaction of the news media to accidents involving multihulls. Apart from the disasters that can befall any boat, western multihulls seem to have the unfortunate habit of getting out of control, getting airborne, and landing on the wrong part of a wave. The resulting crash makes stop press news every time. I have a hunch that we in the West may have put our dagger boards (or rudders) in the wrong place. On our high speed rafts, and that it would be a good idea to do what Jim Wharram has proposed in the SAILORMAN, i.e. to study the seamanship of Polycats seriously to improve the safety and control of our boats, I am suggesting that an interest in the development in self steering will help to solve our seamanship problems too. Fortunately, the Polycat is one of the safest multihulls around, and its hull shape is designed to deal automatically with many of the control problems that we face. Please do not saw off your skegs and rudders until the possible alternatives have been fully proved!



But how far can we go with the Kon Tiki principle on our Polycats, that is, the use of a number of dagger boards with adjustable immersion in the water that remain parallel to the hulls? These boards will work at both slow and fast water speeds. The force generated by the board as it slices through the water while the hull is making some leeway, will increase as the square of the water speed, i.e. double the water speed and the dagger board will develop four times the side force. Imagine a Polycat with a board at the forward beam and one at the after beam; might well find the boat self steering on a reach at, say, 4 knots. Let us assume the forward board is more deeply immersed than the after one. If the boat suddenly accelerates to 8 knots, the side force on the two boards will increase, but the more deeply immersed one will generate proportionately more side force. The forward board will therefore turn the boat back into the wind until a new balance is achieved i.e. stop the boat running off downwind. It is important to realise that changes in boat speed will alter the effect that individual daggerboards would have on the boat. The Kon Tiki principle will loose its simplicity and accuracy as boat speed variations increase. A sophisticated form of seamanship will be needed to ensure proper control of Polycats, where dagger boards could be used at the ends of the boat for fairly violent maneouvres, while others nearer the centre of the boat could be used for balancing the boat on course.

And what of that influential board - the rudder - hung on the stern? If you want to turn a raft up into the wind fast, have a rudder or a deep dagger board up near the bows. If you can eliminate the rudder, so that someone does not have to hang onto it, you have almost solved the self steering problem.

Motive power is of course a vital element, and while we can assume that the squaresail works on Kon Tiki, how would a raft self steer with a schooner rig. If you can self steer with a variable array of dagger boards below the craft, then one must be able to self steer with a variable array of sails above the craft, as maybe the monohulls do if they loose a rudder.

Obviously, I have oversimplified the self steering problem in order to suggest possible lines of inquiry rather than offer real solutions to problems. Practical solutions will I suspect be a judicious mixture of the Kon Tiki and Western seamanship. The important things to remember are:-

1) Polycats are high speed rafts.

2) Stern rudders are not essential on high speed rafts (if an array of dagger boards were to be used? Ed.)

3) With the speed range experienced by Polycats, control surfaces such as daggerboards and rudders, need to be adjustable in area to ensure efficient control at all speeds.

4) Sail balance is also very important. (Ed.)

There is much of value to be learned from monohull seamanship, but never forget that the multihull is different and that you are the one that has to pass on multihull seamanshup to your fellows so that we will all enjoy pleasant and safe cruising.

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Handraulic Steam

LAUNCHING? LUNCHING AND LAUGHTER by John Agnew, Chelmsford, Essex.

TIKKITAK, as all the world knows, is Maori for 'White Fronted Tern'. (White fronted she is; turn she will not.) So with that point settled let me begin.

She was built over a five year period as a joint venture (brother and self) in my garden. We were fortunate in being able to select a house after buying the Tangaroa plans, so adequate storage and space was demanded of each estate agent. We built in the open without cover - though a polythene sheet was always ready to hand. We had space enough to connect both hulls in situ, and so finalise our mast positions, decking etc., before dismantling for the launch.

We used the customary'Handraulic Steam' for every hull movement, and the table below gives details of power and fuel:

	Adults	Children	Consumption	
1st hull inversion	16	numerous	2 gal beer	12 cokes
2nd hull inversion	9	8	1	" "
2nd hull positioning	20	innumerable	3	24 "
Launching	30/35	plenty	3*	" "

*there was a pub handy.

Conclusion 1: As few as 8 adults and a brace of children (to move blocks, position fenders) can invert a hull. Twice that number to lift (easily) and position a completed hull.

Mustang Marine (of Burnham-On-Crouch) undertook the transport at a very reasonable rate. If the garden gate had been wide enough (it is 8ft. max.), they could have taken TIKKITAK in one journey - both hulls connected. Instead we dismantled during the preceding days, and were ready for the 'off' at 0730 on Saturday 10th April.

N.B. Note the extraordinary willingness of labour to appear at that hour, some of them travelling more than 30 miles.

Sequence of events

0700. Jacked up starboard hull and chocked just abaft balancing point so that the skeg was 2 ft. clear of the ground. all supports were for'ard of the mid point.

0730. Trailer dexterously backed into yard and under hull as far as it would go.

0745. With labour 'paired' off, lifted for'ard part of hull while trailer winch slowly heaved the stern towards the cab.

N.B. Lifting was achieved by stretching lengths of webbing (supplied by P & O Slingfast) under the boat, tying a knot at each end to grasp, then each 'pair' to a sling. Balance was maintained by use of two longer lengths of webbing around the coach roof with a couple of kids hanging on to each of the four ends.

0830. 1st hull on trailer and secured. Various beams and decking snugged in around it. Then, while tractor and trailer headed for Tollesbury (24 miles away) labour obligingly mustered around port hull, lifted it to the gateway, and raised the sfter end with mid-point chocks as before. Then all hands into fast cars to overtake the transport and unload at destination.

c.1000. Hull unlashed, portable items removed, then the tricky business of sliding the hull downhill onto the slipway. This proved difficult since all the weight bore down on the few people able to muster round the for'ard end at the start of the operation.

Conclusion 11 : A couple of trestles would help here to support the bow in between 'heaves'.

Once off the trailer it was no trouble positioning the hull and chocking off. N.B. Tide receding fast, so planned to have float off at high water.

Conclusion 111 : Obtain local knowledge regarding the tide heights to ensure 'lift off'.

c.1100. Returned to base for 2nd hull. No problems but some delay while police and ambulance sorted out a motor cyclist who'd been watching us too closely at 20 m.p.h. !

Conclusion 1V : Make sure police know of intended move and, if possible, are in attendance. (N.B. RSPCA members will be pleased to hear that driver and passenger were both OK.)

c.1330. 2nd hull arrived Tollesbury. Pubs emptied as labour took up positions. Carefully placed hull using tape rule and female eye. Beams a problem to fit due to differing heights of hulls (one still on chocks).

Conclusion V : Have hulls at same level before firring beams!

Making maximum use of diminished (now about 20 bodies) labour, tried to lift both hulls nearer the water (local advice taken too late). This number could not lift the completed boat, so used rollers to run further down slipway.

1630. All ready for the OFF (HW 2230). Lunch and 'good-byes'. Laid anchor in preparation.
2205. Water flooding around bows.
2225. Water around stern.
2230. Would'nt shift.
2235. Would'nt budge.
3340. No movement.
2245. Enormous effort, lifting aft end with baulks of timber (fulcrum-wise), slid off into deep water.
2250. Being towed towards berth - seemed to take one hell of a time.....
2255. Red faced, stopped the tow.....

Conclusion V1 : Lift the anchor before departure!!!!!

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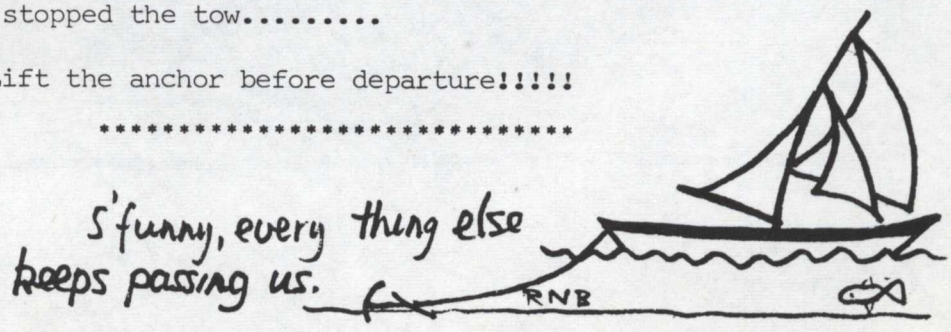
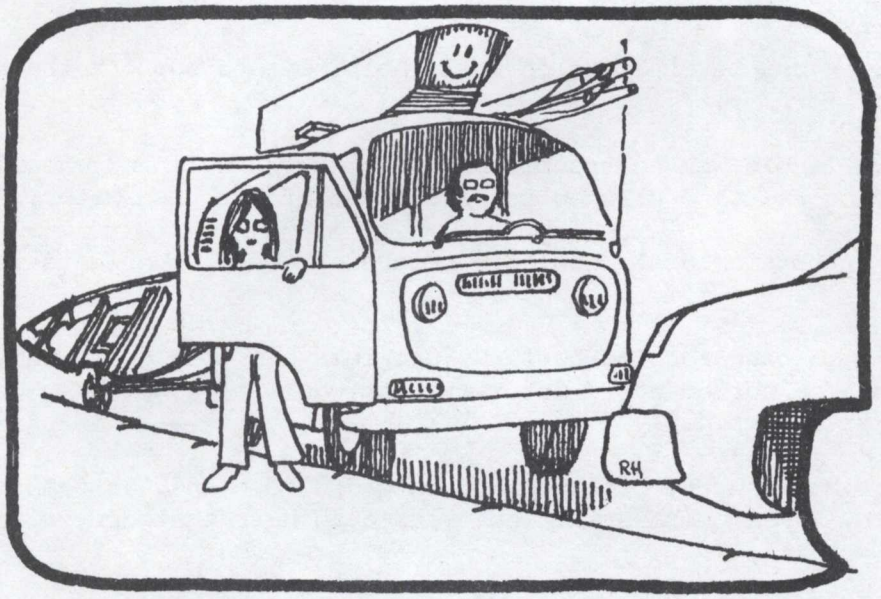
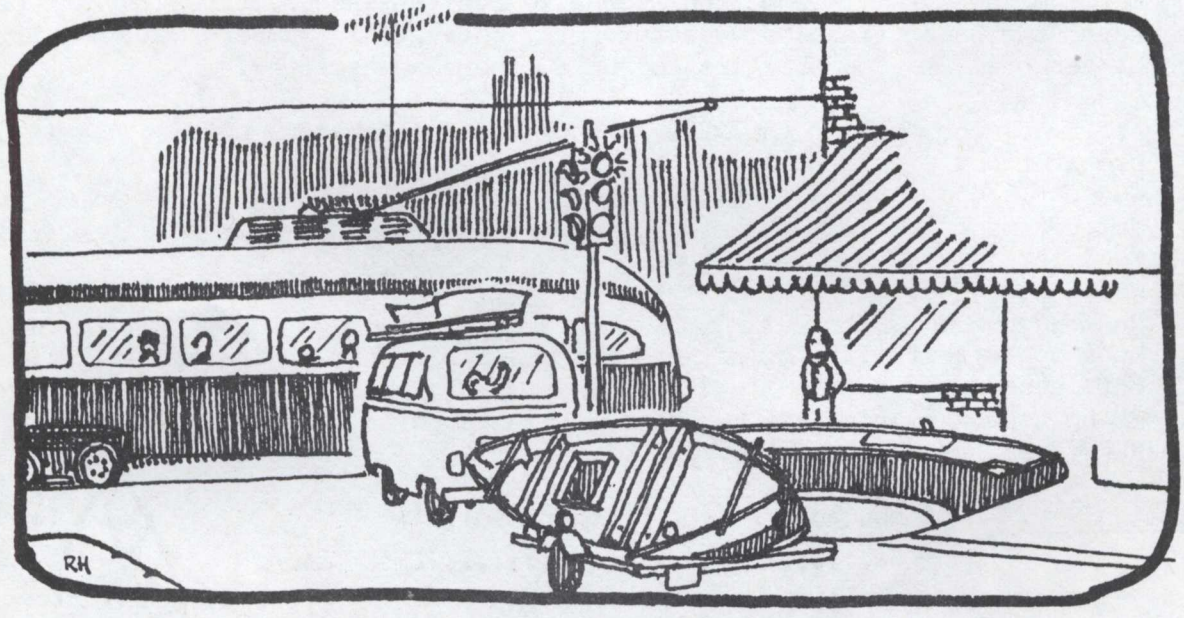


Over which horizon did you sail?

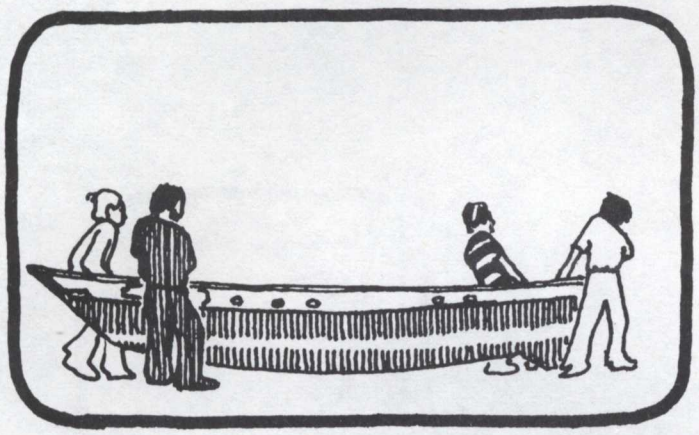
The following is a picture story by Roland Huebsch about the family spring expedition from their home at Glebemount Avenue, Toronto, to Lake Ontario three miles away.



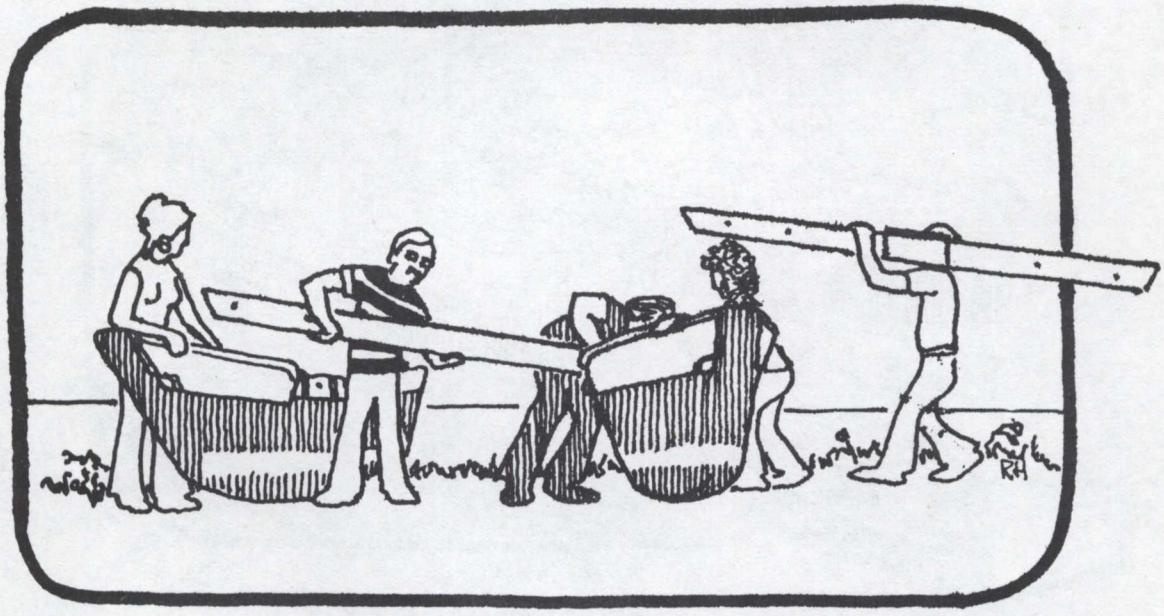
1. The expedition (sandwiches, beer etc., aboard) leave Glebemount Ave.



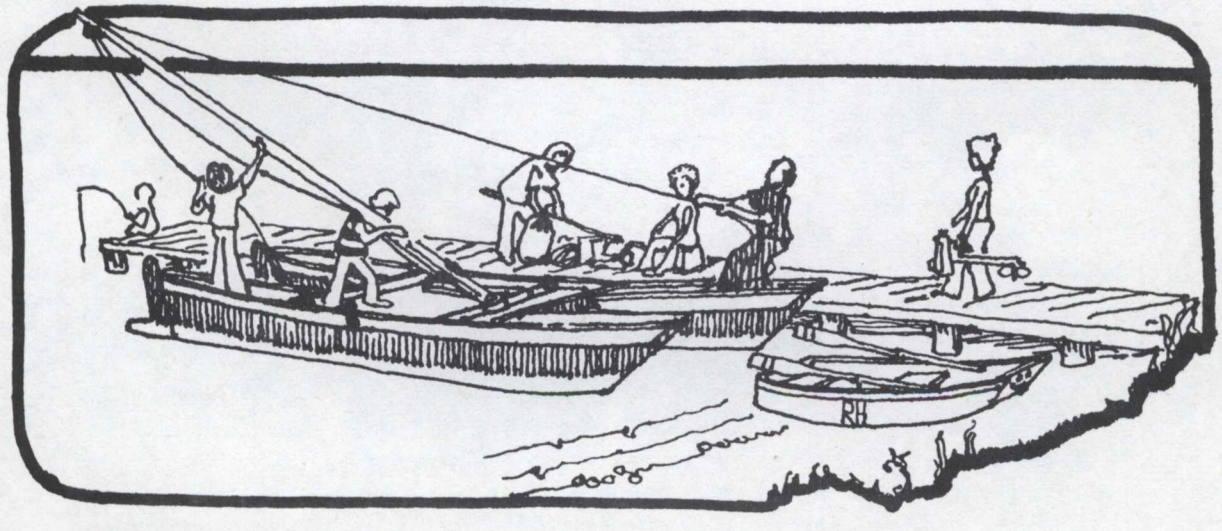
2. At the midpoint, the expedition is temporarily halted by a passing native vehicle.



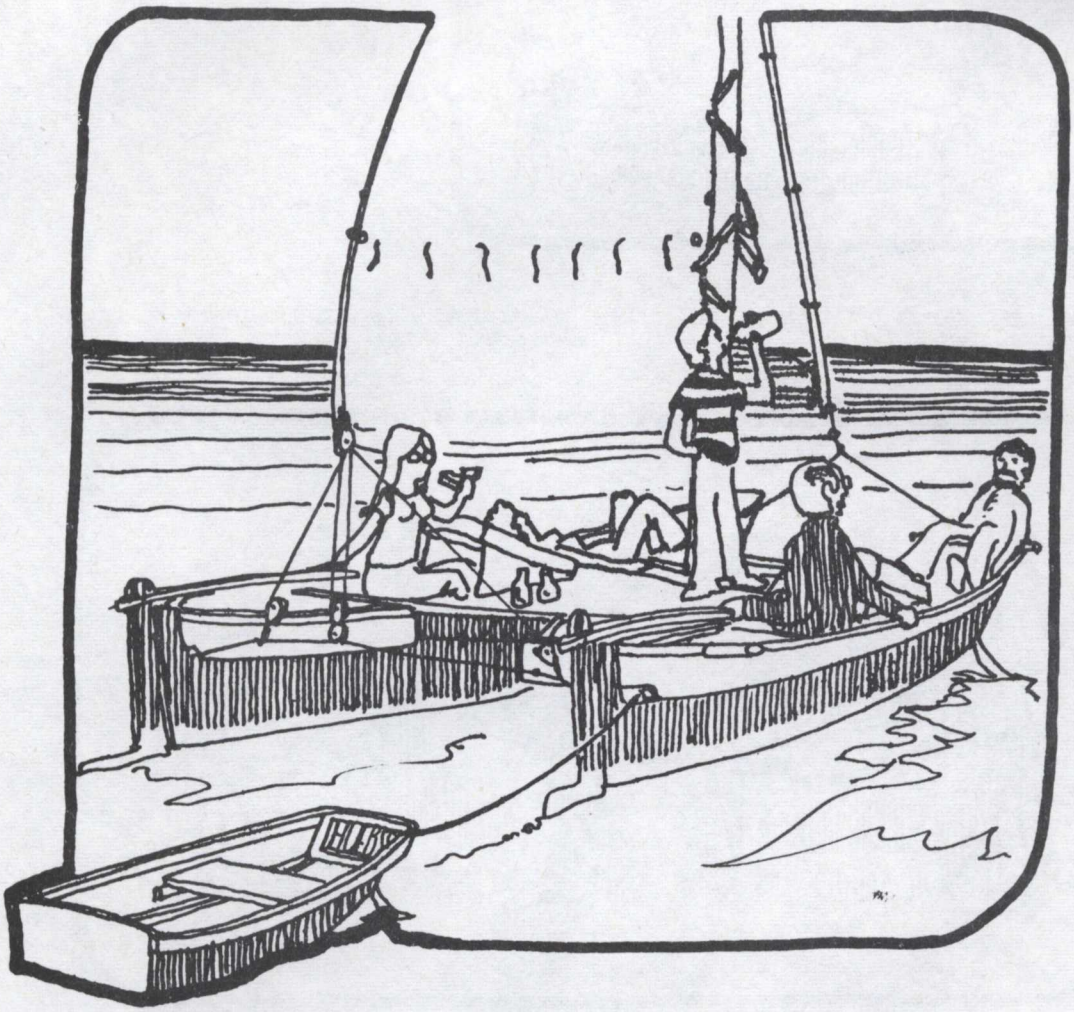
3. The last ten yards, heaving the hulls overland on foot is heavy going.



4. The expedition assembles the craft.



5. Final assembly and supplies taken aboard.



6. The members of the expedition consume their supplies of beer and sandwiches as their vessel sets forth on another summer float.

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A POLYCAT CHARTER TRIP by James McKenny.

This account of a week's cruise in the Bristol Channel in June '75 may help people who want to have a few day's experience of living and sailing on a polycat but didn't realise it could be arranged quite easily and for no more than the cost of the same period at the seaside.

Six of us sailed from Ferryside near Carmarthen, South Wales, in Ernie Pearson's 40' Narai, "Cheetah", on the evening of Saturday 21st June. Besides Ernie there was a young couple Christine and Alan, Ken and Derek and myself. Chris and Alan were experienced dinghy sailors and had also sailed on charter monohulls off the Scottish West Coast and the English South Coast. Ken had a fair amount of motor cruiser experience and Derek a little. The surprising thing was that none of them knew anything much about Polynesian catamarans. They just happened to answer Ernie's advertisement in the "Practical Boat Owner". He had been getting weekend charter trips together for the last few years but this was the first year of arranging some trips for a full week.

We anchored at 2005 off Tenby, 15 miles away, and were under way again Sunday morning, wind E. force 3 at 0740 for a leisurely day's cruise west along the Pembrokeshire coast. I was soon gaining confidence in using the Silva bearing compass which I'd had for years but never had a chance to use at sea before, plotting the bearings on the chart or calling them out for Ernie (or Ken, who had done a navigation course the previous winter and was anxious to put it into practice) to plot. Christine was doing more than her fair share of the cooking, especially the first day or two, and the coffee and bacon and eggs tasted great eaten on deck in the warm sunshine as we entered Caldy Island sound.

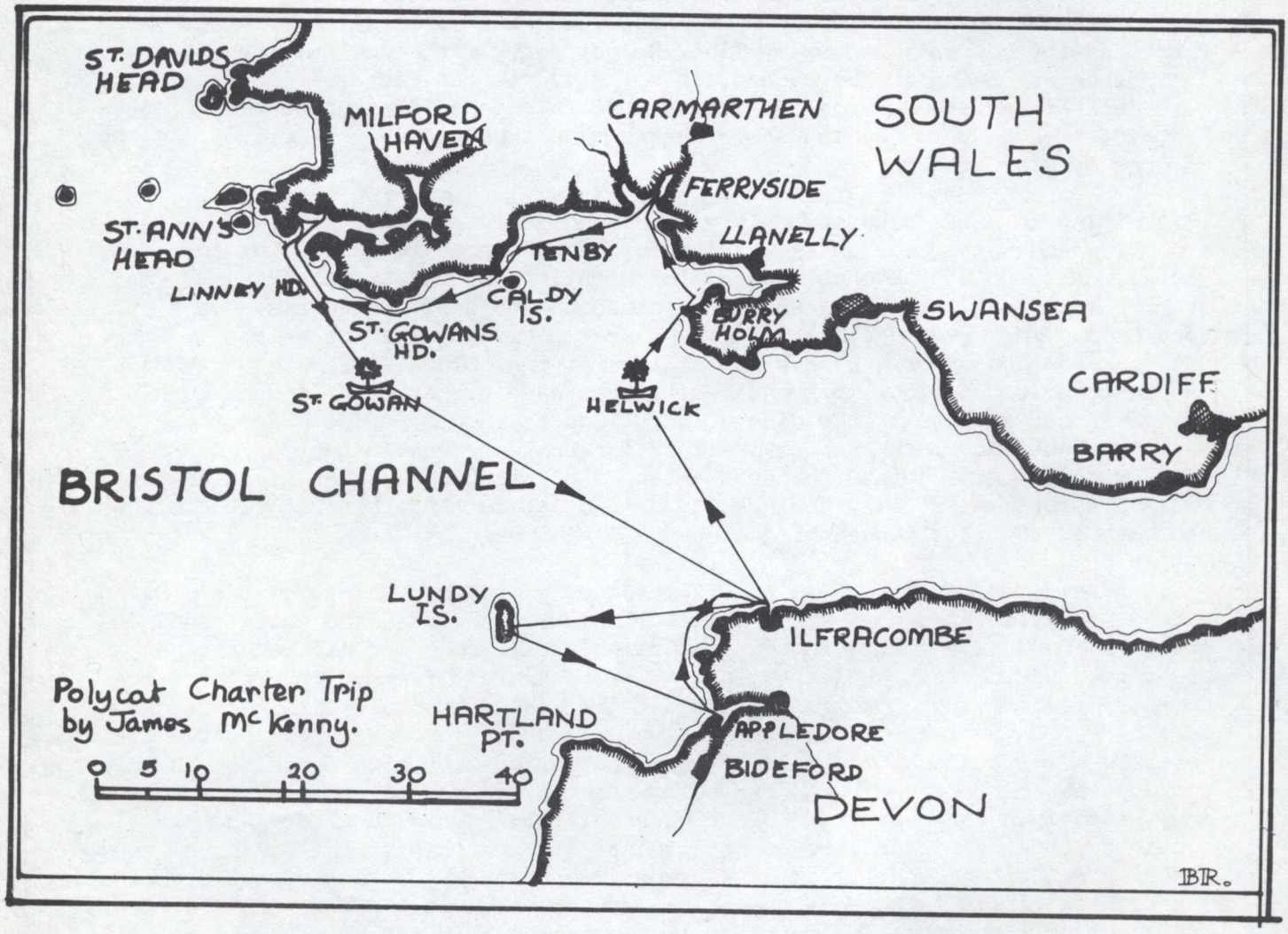
An hour or so later the sea was full of jellyfish, white filmy veils six or eight inches across, with four reddish-pink lobes at the centre. They looked like delicate living flowers. Lying on the foredeck one got quite a close look at them as they passed underneath.

Later following Alan's example we rigged a few fishing lines and trailed them over the sterns. I had never fished before, but had brought along a spool of line and some hooks and spinners. When we finally ran into some mackeral about 1100 the first one (of course), was on my line. He got away, with one last frantic leap just as he was being jerked aboard, in spite (?) of the fact that I was getting a good deal of assistance from the others, but this proof that there were fish to be had, got everybody to fishing in earnest and we soon had enough for tea. I even got one myself later.

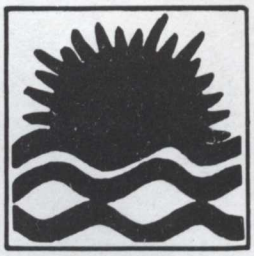
Arriving in Milford Haven estuary, we anchored in a little bay just inside St. Ann's Hd. and had a meal while waiting for enough water to take us up into Sandy Haven, where at 1750 we anchored for the night. About 200 yards wide and something under a mile long, well sheltered and wooded on the west side, it's a very pleasant spot on a summer evening. Besides Jim Wharram's "Tehini" and other boats, there was an Narai and an Oro, both with families living aboard. I ferried Ken and Derek ashore to go to the local pub and had time to have a chat with Jim and Ruth and the girls before getting the dinghy, which was trying to bed down for the night as the tide went out, back out to "Cheetah" for Ernie to use. Later, as the small estuary dried out I joined Chris and Alan in a walk on the sands, finding an amazing assortment of tiny shrimps, crabs and interesting things to look at. We had covered 28 miles since morning.

We were under way at 0620 Monday 23rd June, slipping down out of Sandy Haven under the merest breath of wind. When well clear we started the engine and set off up Milford Haven which in spite of being a main port for oil tankers has a great deal of interesting scenery and quiet backwaters farther up. Passing the port of Milford Haven itself, and the oil jetties with some VLCC's alongside we continued for 15 miles to Picton Point where the east and west fork of the Cleddau join. Then, back-tracking a mile we anchored on the west side opposite Landshipping and went ashore for a walk, to browse over an interesting assortment of old boats, many of them in various stages of being rebuilt or repaired. After lunch we continued back to Milford, to anchor at 1530 off the slip by the Longhouse and go ashore for supplies and a look at the town. We found a good assortment of chandlery and fishing tackle in some of the shops. We were back at the slip at 1700, where Ernie solved the problem of getting all the stores on board by motoring in till the port bow of "Cheetah" was nudging the slip where some of us held her in while the other got the boxes and bags on board. Five minutes later we were all on board and reversing gently away from the slip. Ruth came out of the Longhouse and waved to us as we left. After some interesting sailing in the Haven in fresh winds between Milford and Dale, we anchored again for the night in Sandy Haven at 1930.

By 0800 the following morning, Tuesday 24th, we were back out in the Bristol Channel, on a track of about 148° heading for Ilfracombe, 50 miles away on the Devon coast. The weather was still fine with an easterly force 3 and a boat speed of 4-5 knots. We took photos of the St. Gowan lightship in passing and altered course to make good a track of about 120°. Lundy Island was sighted at 1300 and by 1500 a bearing of 030° from its southern tip indicated about 16½ miles to go. The coast ahead was still a featureless hazy blue mass but eventually things like radio masts and 'Hotel Conspic's' could be identified and by 1930 we were entering Ilfracombe and by 2015 moored in the inner harbour. We went ashore, (myself feeling conscious of the fact that we had left a Welsh harbour that morning, and sailed across the seas and were now in England), to find the place thronged with holiday-makers and, it seemed, all the shops open. We bought fish and chips, (for which Ernie insisted on paying), so that we could eat and sight-see at the same time and then had a welcome drink or two. The 55 miles covered since leaving Sandy Haven that morning made it the longest day's sailing of the week.



Wednesday morning the 25th, still enjoying good weather, we sailed out to Lundy Island, 20 miles away, arriving at 1200. Average speed 5 knots. There was a bit of a tide rip still running which made life interesting for a spell. Lundy is pretty well surrounded by tide rips and overfalss, their activity depending of course on the state of the tide, (and the wind). We anchored off the landing place at the SE corner of the island, sheltered by Rat Island which is very small and steep and joins Lundy at low tide. CHEETAH was still pitching vigorously in the very short steep sea, though she was very buoyant and little or no spray came aboard.



Going below for a drink of water and lime jiuce, I was amazed to find everything in the galley looking spick and span. Alan agreed that on monohulls he had sailed in previous years the whole lot would have been in a jumbled heap on the cabin sole by now.

Conditions were still a bit marginal for attempting a landing on the mostly rocky beach on which waves were still breaking but after a little while Ernie decided to have a shot at it. We got the dinghy launched and with him forward at the oars and Ken and Derek in the middle and stern, it set off. Ernie rejected the first little beach after a close look, and headed for another slightly calmer one close to Rat Island. He backed the dinghy in carefully till the water was about 2' deep, (one touch of the sharp little rocks and stones underneath, as the boat rose and fell, would have knocked a hole in the bottom). Then Ken and Derek got out over the transom, holding the boat off as they did so, and waded ashore carrying trousers and socks in plastic bags slung round their necks. The second trip taking the remaining three of us ashore, was rather less difficult, as the waves were subsiding somewhat by this time. But the same care was needed not to let the dinghy ground. Rejoining Ken and Derek (Ernie returned to CHEETAH), we scrambled over the rocks along the foot of the cliffs for a few hundred yards to the bottom of the steep track that traversed up to the comparative plateau above. Although rough and rather steep in parts it had recently been widened and improved so that a tractor or a Landrover can use it. About 250 feet up we stopped at a level where some trees grew, and looked down at the anchorage. CHEETAH was lying peacefully at anchor in a calm sea almost below us and the tide rips of an hour earlier seemed as though they couldnt really have happened.

Lundy Island is about $2\frac{1}{2}$ miles by $\frac{3}{4}$ and 425 feet high, steep on all sides and fairly flat on top. Once up the steep winding track from the beach its rather like being in mountain country. About the 12th century it came into the hands of a Norman family, the Marisco's who built a castle and live there for some centuries. Later it came to be a haunt of pirates, among them the famous Captain Kidd, preying on ships heading up or down the Bristol Channel. There's an Inn which looks 18th century, also a church and a post office/store on top, and we posted some cards franked with the Island's own postage stamps. I had never seen birds who acted so tame and independent as the wild birds on Lundy. It has been a bird sanctuary now for some years. Hanging on the bare whitewashed walls of the Inn, with its floor of stone flags, were a number of life buoys washed ashore from ships which had been wrecked off Lundy over the past century or more. Later, on the way back down to the landing place, one noticed the short grass browned by the prolonged dry weather, and the mountain sheep exploring in some risky spots on the cliffs in search of an overlooked bite.

Once back aboard, we had lunch, for which everybody had a good appetite since it was now after 1530. We then set sail, this time for Bideford where we tied up at 2130.

I couldn't see a thing when I looked out of the port in my bunk the next morning, Thursday 26th June. It wasn't condensation on the glass. The vis. was only fifty yards. The radio forecast last night hadn't mentioned fog closer than the Scillies. By 0925 it had cleared to 100-200 yards and we motored carefully down the river and out the channel to the bar buoy, then turned port until well clear of the fairway and anchored in 30 feet.

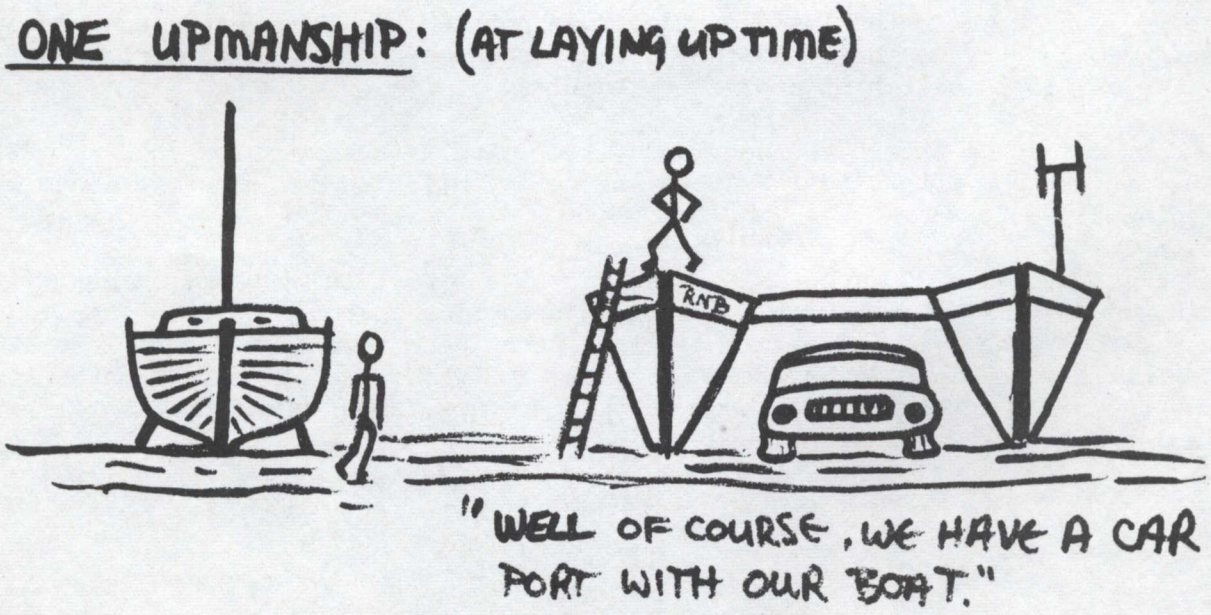
We caught some interesting fish, including a red Gurnard which looked much too exotic to be wandering about in the Bristol Channel. At 1705 the fog had cleared, and we set off up the Channel tacking into a NE force 3 wind. The tide helped us but made things rather choppy. By 20.30 we were moored in Ilfracombe.

Friday 27th brought force 5 N/Easterlies as we set off at 0950 heading 350° enroute back to Ferryside. It was full oilskins and an extra sweater for the first time all week. With the mainsail down and the mizzen staysail up the speed varied from 7 to 10 knots. We rounded the Helwick Lightship at 1250 and soon got into calmer waters in the lee of the Gower peninsula, anchoring at 1505 off Burry Holms. At 1805 it was time to set off on the last leg with the tide up to Ferryside, where CHEETAH tied up to her own mooring about 2130.

As my first experience of going to sea in a yacht it was a memorable one. We got on well as a crew and we all took turns doing all the jobs on board, though some of us did more of some jobs and less of others. Alan did more sail handling, for instance, and I think I did more steering and navigating, than average.

Although the trip was advertised as a sailing holiday, I doubt if I'd have learned much more about seamanship and navigation from going on a cruising course at twice the price. Ernie was always ready to explain anything one wanted to know and made a point of discussing future plans and tactics with us so that we knew in advance what was going to be done, and how, and why. I'd had no practical experience of sea navigation before but had done some air navigation 30 odd years ago and had in more recent years read a good deal on the subject by Hiscock, David Lewis, Bernard Moitessier and others, and in the yachting magazines. The ample opportunities on the trip of putting it all into practice brought a great sense of achievement and confidence. And some aspects of coastal navigation, like the continual necessity in the Bristol Channel for working the tides, are probably better learned by seeing them used in practice.

Even at 1975 levels, the £35 ($70) all in, that Ernie charged for the trip was an extremely reasonable price to pay. I would expect to pay £55 or upwards in 1976. If anyone wants to get themselves a similar trip, and drops a line to the Secretary, I think they will be surprised to find how easy it is to arrange.



THE ISLES OF SCILLY

by Blame per Strings.

INTRODUCTION

Having been unable to persuade the Secretary and Editor of the PCA to go below whilst I took the helm of RAKA recently, off Land's End, so that she might be 'blown off course' 28 miles WSW of the Longships LH., I though it would be a good idea to whet their appetites with an article on the Isles of Scilly. With any sort of a well built Polynesian catamaran, the islands make ideal cruising grounds for those with a little common sense who want to savour the delights of 'desert islands' without having to cross thousands of miles of ocean and not being outside coastal waters so as not to lapse insurance cover. There are many pitfalls for the unwary, but I hope that the following will show the best way of tackling the area, certainly for the first time.

For Polynesian catamarans, there are only a few dangers outside the areas indicated on the sketch chart of the group. However, common sense should always prevail and where there is broken water, it is generally due to the presence of a rock just below the surface.

After you have arrived in the islands and had a good look at the sea at low water, you will have a better idea of what you can or cannot do in a Polynesian catamaran. On calm days, it is possible to stand on deck looking down into crystal clear water and sail to all the islands even through the shallow water to St. Martins. The 'growlers' are easily seen on a smooth calm day by keeping a good lookout from the foredeck. They also tend to churn up the water when the wind and seas ruffle the surface.

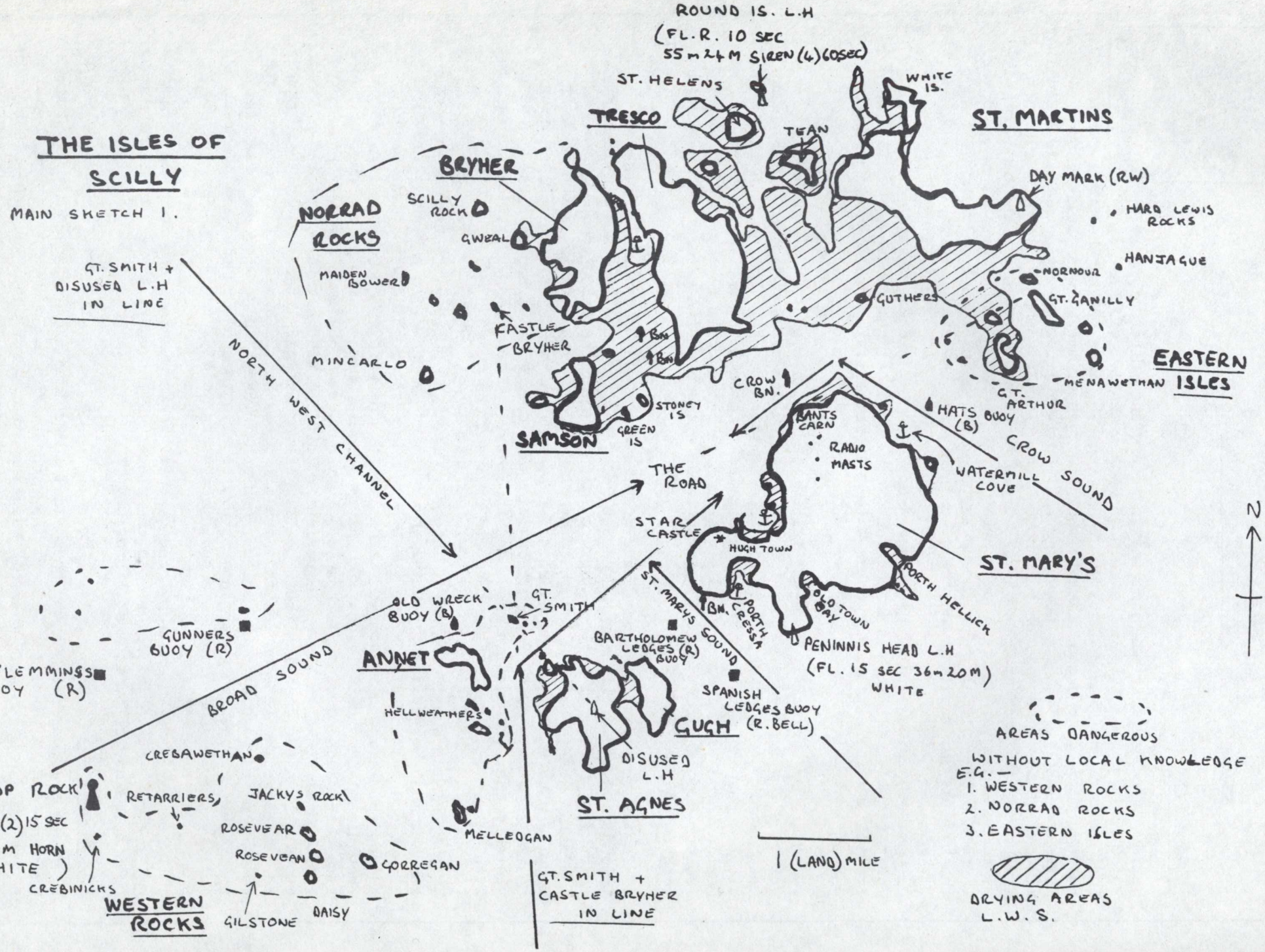
The inter island launches leave Hugh Town at 10.15 and 14.15 for the off lying islands and round trips to the Bishop Rock, Eastern Isles and Round Island. These trips are well worth trying, just to learn some of the easier channels between the islands. The boatmen and their handling of the launches is second to none, and coupled with their knowledge of the area, are well worth talking to. But do not, on any account, try to follow them into the 'dangerous' areas as marked on the sketch chart. The boatmen know each and every rock and pass very close, sometimes with only two or three feet to spare or less.

The Islanders main source of income is from the holiday trade in summer. Therefore it must be realised that the inter-island launches, in a sense, carry the life-blood of the Islands and the boatmen do not take kindly to fools messing around and making nuisances of themselves on the water. The boatmen are reasonable enough and are generally only too happy to help where possible. The harbour master also has enough problems with such a busy quay at Hugh Town, and moorings are very full. Some of the locals are experiencing difficulties retaining their own moorings especially after changing their boats. Neither are permitted to lend their moorings to visitors. The reasons for this are not clear but it appears that attempts are being made to reduce the number of moorings in the harbour whenever possible. I think that Polynesian catamarans should be able to show how the shallow draft and ability to take the ground are advantageous in Scilly.

Extremely pleasant holidays can be spent in the Isalnds and there is plenty to do. If you want to 'discover' all the places of interest, there are a number of good books on Scilly in most libraries.

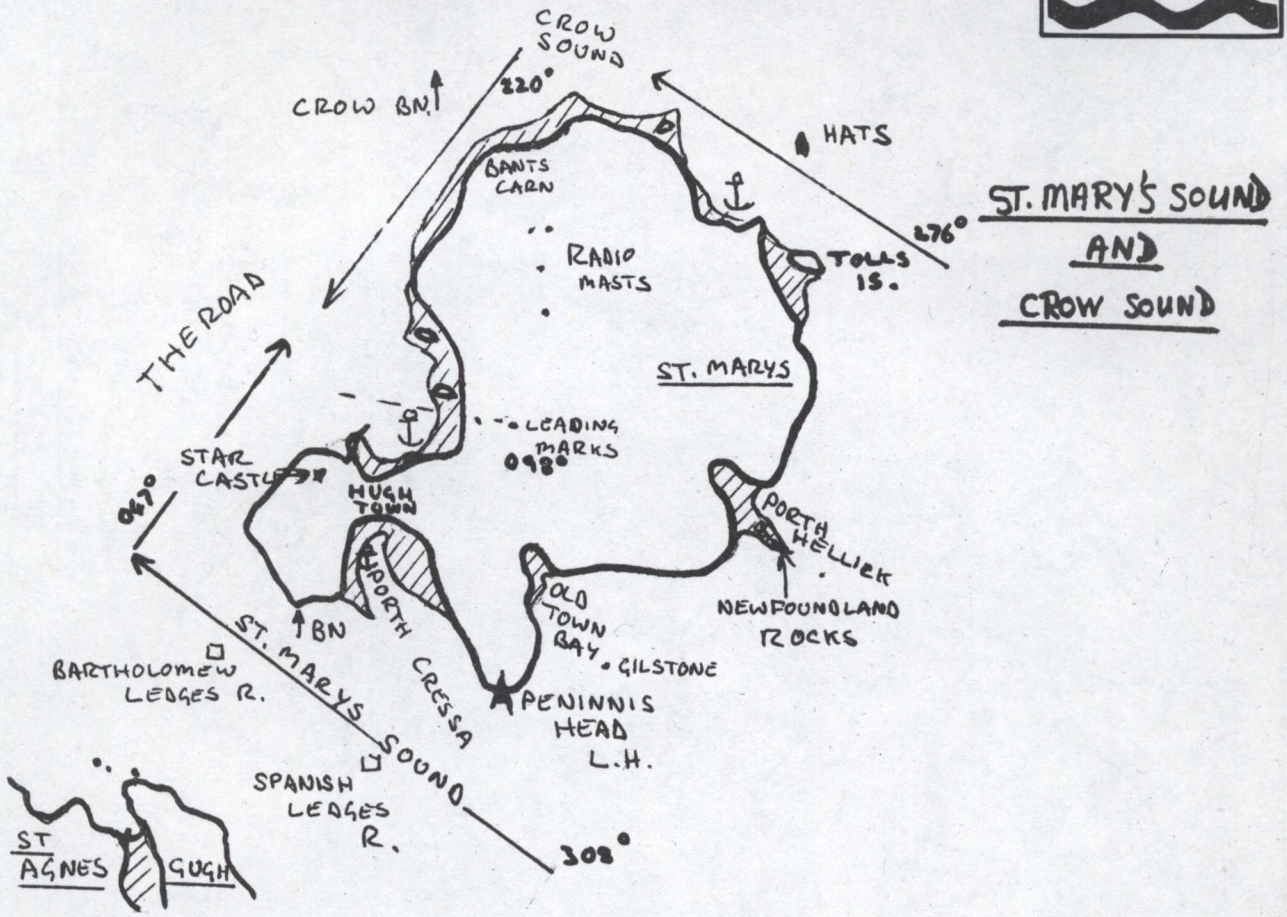
RECOMMENDED CHANNELS

There are four recommended channels leading into the Roads and into the main harbour at Hugh Town, St. Mary's. They are St. Mary's Sound, Crow Sound, Broad Sound and the North West Channel. Ther are others, but until you are able to gain a little experience and local knowledge and can identify the landmarks for the channels such as Smith Sound and New Grimsby Channel, they are not advised.


THE ISLES OF SCILLY
MAIN SKETCH 1.
ROUND IS. L.H
(FL.R. 10 SEC
55m 24M SIREN (4) 60SEC)
ST. HELENS
WHITC IS.
TRESCO
TEAN
ST. MARTINS
BRYHER
DAY MARK (RW)
HARD LEWIS ROCKS
HANJAGUE
NORNOUR
GT. GANILLY
GUTHERS
SCILLY ROCK
NORRAD ROCKS
GWEAL
MAIDEN BOWER
CASTLE BRYHER
MINCARLO
Bn
Bn
GT. SMITH + DISUSED L.H IN LINE
NORTH WEST CHANNEL
EASTERN ISLES
MENAWETHAN
GT. ARTHUR
CROW BN.
STONEY IS
GREEN IS
SAMSON
HATS BUOY (B)
CROW SOUND
WATERMILL COVE
RANTS CARN
RADIO MASTS
THE ROAD
STAR CASTLE
HUGH TOWN
ST. MARY'S
PORTH HELLICK
OLD TOWN BAY
PORTH CRESSA
Bn.
PENINNIS HEAD L.H
(FL. 15 SEC 36m 20M)
WHITE
ST. MARYS SOUND
OLD WRECK BUOY (B)
GT. SMITH
BARTHOLOMEW LEDGES (R) BUOY
SPANISH LEDGES BUOY (R. BELL)
GUGH
ANNET
HELLWEATHERS
DISUSED L.H
ST. AGNES
GUNNERS BUOY (R)
FLEMMINGS BUOY (R)
BROAD SOUND
CRESAWETHAN
BISHOP ROCK
(Gp. FL. (2) 15 SEC
44 m 25M HORN
WHITE)
RETARRIERS
JACKYS ROCK
ROSEVEAR
ROSEVEAN
CORREGAN
MELLEDGAN
CREBINICKS
WESTERN ROCKS
GILSTONE
DAISY
GT. SMITH + CASTLE BRYHER IN LINE
1 (LAND) MILE
AREAS DANGEROUS
WITHOUT LOCAL KNOWLEDGE
E.G.—
1. WESTERN ROCKS
2. NORRAD ROCKS
3. EASTERN ISLES
DRYING AREAS
L.W.S.
2

St. Mary's Sound

Approach from the SE course 308 T. with Spanish Ledges and Bartholomew Ledges to port. When Bants Carn and Creeb line up change course to 047 T. until the leading marks are in line, course 098 T.



Crow Sound

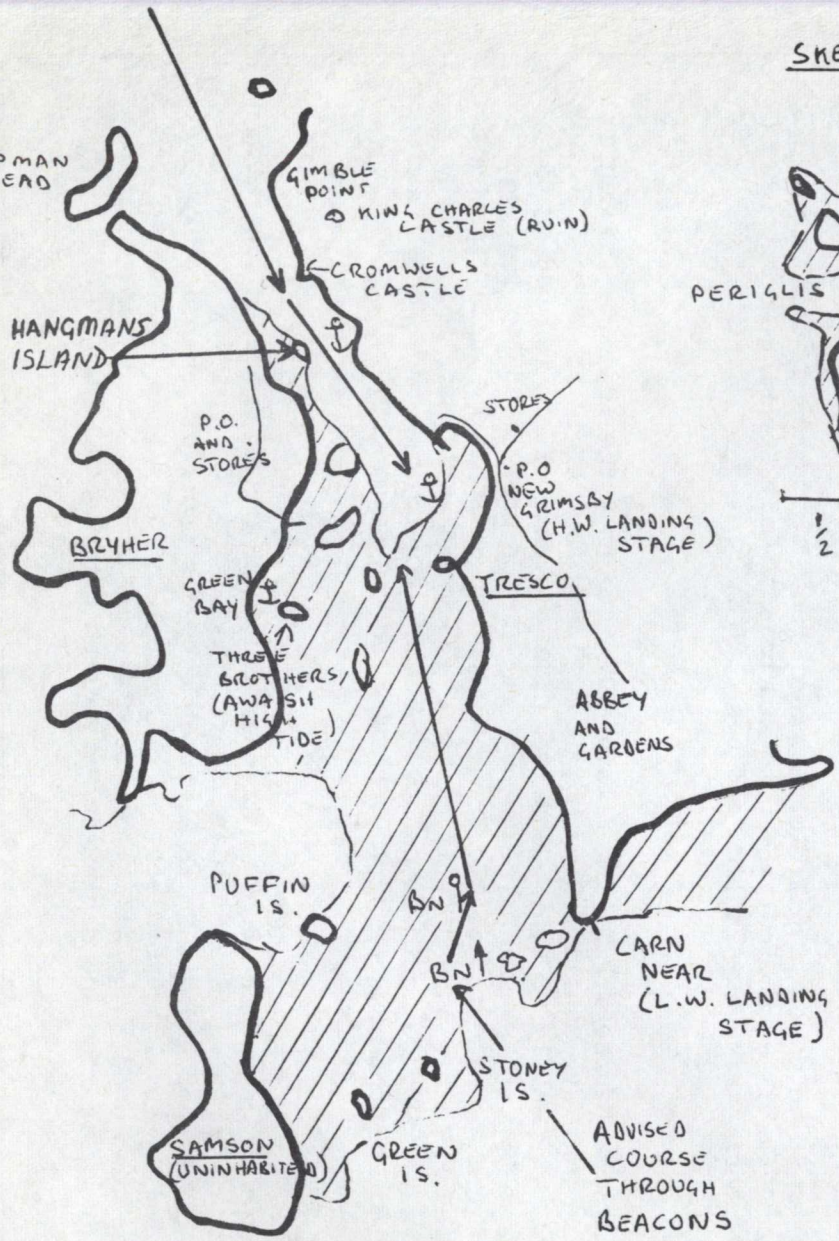
Approach from SE on course 276 T. leaving Hats buoy to starboard, until Crow Rock beacon bears 264 T. Leave Crow beacon to starboard, while steering course 220 T. until the transit marks are in line and bear 098 T.

Broad Sound

Approach from SW course 059 T. The Pilots all state that the transits are Bants Carn in line with Gt. Ganilly. However, from Bishop Rock LH it is often difficult to make out Gt. Ganilly or Bants Carn from that distance. It is far better to take a course between Flemmings Ledge buoy and Bishop Rock on 059 T. leaving Gunners to port, thence to the Old Wreck buoy north of Annet by which time Bants Carn should be visible unless it is misty or foggy and any landfall in Scilly without local knowledge would be chancy. WARNING - there are strong cross currents in most areas of Broad Sound and thus check your course made good.

North West Channel

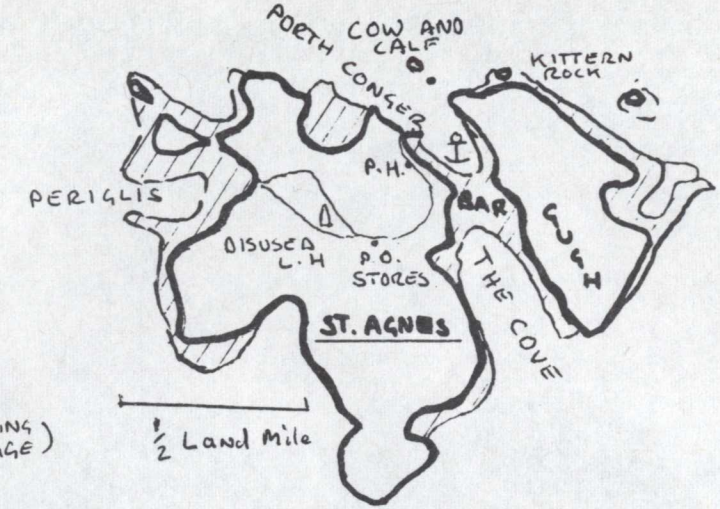
Approach from NW on course 130 T. with the disused LH on St. Agnes in line with the Gap in Gt. Smith until Bants Carn bears 059 T.
Note: Castle Bryher and Gt. Smith are both very distinctively shaped rocks and should be fairly easily recognised.
The courses mentioned above will keep you clear of dangers but in most channels there is plenty of room and depth for Polynesian catamarans.



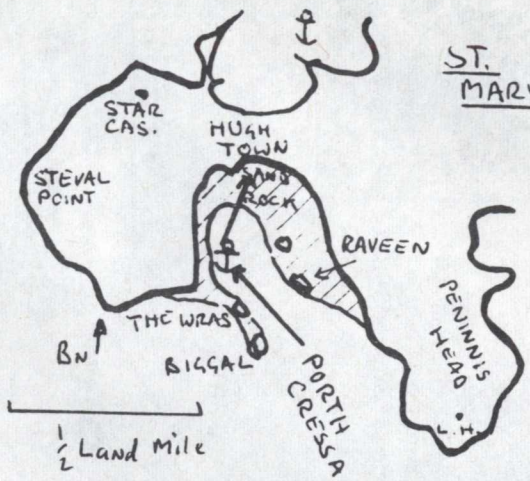
SKETCH 4.

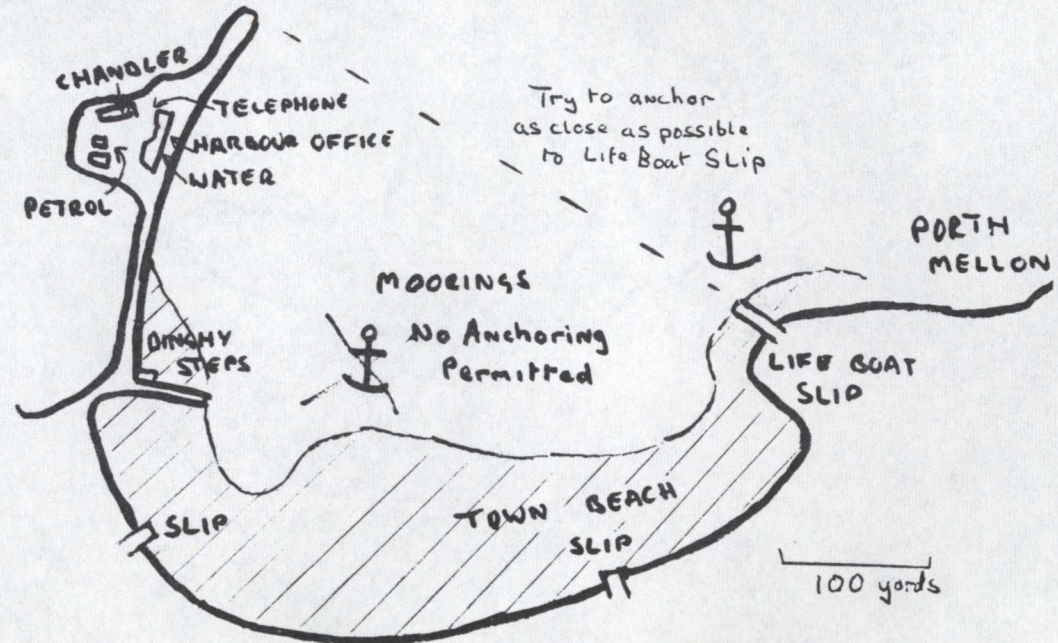
BRYHER AND TRESCO CHANNEL

SKETCH 3. PORTH CONGER



SKETCH 2 PORTH CRESSA





HUGH TOWN AND HARBOUR ST MARY'S

ANCHORAGES

ANCHORAGES AND MOORINGS

As with most island life, the main centre of affairs is at Hugh Town on St. Mary's. It has most of the 'facilities' of the mainland including banks, shops, pubs and clubs. As on land, such places cost money to 'park'. In the harbour at Hugh Town, to lie to ones own anchor costs 3p per foot per day (+VAT) and even then you will have quite a long row to the quay. (Monos are charged 2p etc. More multihull discrimination!) For this charge, you are only permitted to anchor as shown on the sketch and this can be fairly exposed if the wind is a strong WNW. You do have the advantage of loading and unloading at the quay (with the harbour masters's permission). Outside of Hugh Town harbour, the anchorages are free. These would include the following:
Porth Cressa, Watermill Cove, Old Town Bay, all on St. Mary's; Porth Conger on St. Agnes; and anywhere in the New Grimsby Channel.
Which is most suitable, will depend on the wind direction and tide as some of the anchorages are exposed in certain winds.

Porth Cressa (sketch 2)

The entrance has to be made from SSE keeping Biggal and Wras Rocks to port and Raveen Rocks to starboard. There is a patch of sand about half way into the bay as indicated on the western side of the 'fairway'. It is easy enough to locate by looking into the water at the bottom. Drop the anchor only on to this sand. The rest of the bay is rock and boulder which is not good holding ground. There are also a number of lobster pots to make life interesting. If you are willing to take the ground, go well inshore up to the edge of the beach (not at low water) and anchor fore and aft. This will then bring you closer to Hugh Town which is more convenient than if you had to pay for harbour dues on the other side of the town. Keep an eye on the weather as this anchorage is exposed to S and SE winds.

Porth Conger, (St. Agnes) (sketch 3)

The crossing to St. Agnes from Hugh Town is the least complicated of all the trips to the off lying islands. The main danger lies at the entrance to Porth Conger with the Cow and Calf Rocks. The Cow is always visible, but the Calf, halfway across the entrance between Gugh and the Cow, is covered at high tide and is dangerous even to a Polycat. Either enter the Porth from the western side of the Cow or creep in carefully close to Gugh. The anchorage is good but when the 'bar' between Gugh and St. Agnes is covered, there is a strong current and plenty of scope with good ground tackle is required. The Turks Head PH is sited conveniently overlooking the anchorage and supplies excellent pasties and liquid refreshment. The main 'road' passes the 'bar' up the centre of the island where the Post Office and General Store is situated. The road leads on past the disused lighthouse, one of the first built in the country, thence on to Periglis where the old lifeboat station was sited. The remains of the slip can be seen and it was thought to be the longest slip of its type in the world when built.

New Grimsby Channel, Tresco and Bryher (sketch 4)

Probably the best anchorage in the islands (its free). The tides are not too strong and facilities are good ashore. There is supposed to be a landing charge of 30p on Tresco but in practice this only seems to apply to passengers from the motor launches landing at New Grimsby or Carn Near. The entrance from St. Mary's roads is marked on the sketch chart. It is possible to sail over most of the rocks and sand indicated at high water, but this should not be attempted until the area has been seen at low water. If entering from the north, keep Hangman's Island in clear water between Gimble Point and Shipman Head. A Polynesian catamaran should be able to anchor fairly close to the quay, if not in the bay off New Grimsby at

most states of the tide.

Green Bay, Bryher

This anchorage dries out but is well protected from nearly all sides. Before anchoring or entering Green Bay, view the area at low water as the Three Brothers Rock which partly protects the bay is covered at high water, and is therefore dangerous to the unwary. The Admiralty chart for this bay is on too small a scale to show the extent of the rock and should not be relied upon. If I had to leave my boat in the Isles, this would be my first choice. Keith Bennett chose this site for hi one-man business of building catamarans (unfortunately not Polynesian cats). He has one or two moorings which he sometimes allows visiting catamarans to use, but this has to be by arrangement with Keith when arriving in the Scillies. You may be able to obtain water and fuel in an emergency, but it would be more convenient to obtain these at Hugh Town before leaving. The Post Office and General Store on Bryher are on the main 'road' leading northward from the quay. There are no pubs on Bryher but a quick row over to New Grimsby will enable yourself to slake one's thirst at the 'New' Inn.

CHARTS

For the passage from the mainland - Trevose Head to Dodman Point including the Isles of Scilly.
In and around the Isles - No. 34, The Isles of Scilly 1972.
There is another chart available in Scilly based upon the original 1906 Admiralty Chart, now published by Slim Macdonnell Ltd., 1975. This has 'Not to be used for navigation', printed over it, but after making allowances for compass variation, this is a more helpful chart than the present 'official' one. It also has the positions of the wrecks about the Islands. At present, no catamarans are on the charts, but from some photographs and information received, there have been several near misses, mostly from anchor and mooring problems. So have good ground tackle.

USEFUL TELEPHONE NUMBERS (all Scillonia Exchanges)

Customs 571 - Coastguard 651 - Hospital 392 - Doctor 628 - Dentist 694 - Police 444 - Harbour Master 768 - Keith Bennett 411.

It has been my ambition to sail my own catamaran to Scilly and enjoy the meander through Scillonian waters at will. I am now building a Tangaroa, which hopefully, will be completed for 1977. However, plans do get delayed and I may be available to 'thumb' a ride to the Islands. Anyone intending to go there on their boat may like to contact me through the PCA Treasurer (Southend 353201).

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Robin Fautley now has reprints of various articles from old Sailorman issues. These total about 180 pages. For further details write to Robin at:-

11 Park Street,
Southend-on-Sea,
Essex, UK.

BUYING OR SELLING ?

FOR SALE. MAUI, 5 years old, BS 1088 ply, red deal and English Oak, bronze gripfast nails and brass screws, SS rigging. Sound condition. Various extras. Ring: Nottingham 0602-621359, ask for Peter Green.

FOR SALE. ORO, built of 1088 marine ply, nylon sheathed. Comes complete with beams and fittings and requires little work to get afloat. Arrangements can be made to get it moved to another site in the UK if required. Any Offers? Reply to: Keith and Jenny Searle, 19 Old Roselyon Cres., St. Blazey, Par, Cornwall.

FOR SALE. HINEMOA, professionally moulded GRP hulls and cabin tops, 5 sails, seagull o/b. £1150 ono. Write to Bill Wraith, 40 Bay View, Amble, Northumberland. Tel: Amble 231.

FOR SALE. HINA, 3½ years old, hulls cascover sheathed, raised sliding cockpits on each hull. Sprit rigged, Jeckells sails. Spruce mast with SS rigging and fittings. Fully painted and ready for cruising, with anchor warps, fenders, elsan mini-loo, Seagull Silver Century Plus o/b with longshaft. Fibreglass dinghy. £1000 ono.
The boat is moored at Fambridge, river crouch. Moorings available.
Write R.P. Clarke, 15 Hilldene Ave., Harold Hill, Romford, Essex.

FOR SALE. TANGAROA, 36' x 17' x 2'3". Called NOUM-AS-DAI (UK Reg.) Good condition. 1088 ply, British Columbian Pine, Cedar wood slatted deck, fibreglassed deck and keel. Professionally made wooden masts. Mods- 50% oversize cross beams plus extended walls. Strengthened mast case. Bowsprit, inertia handing knees in bunks. Rounded cabin tops.
Experience - Two single handed Atlantic crossings.
Equipment - 5 Jeckells sails, Bermudan ketch. Echo sounder, seafix, VDO speed and distance log, selfsteering QME, liferaft, jackets, flares, mattresses, sextant, etc. Absolutely complete-even chart diciders!
Price £4850. Write: R.L. Knight, 12 Stowell Crescent, Wareham, Nr. Poole, Doreset.

FOR SALE. The Secretary has been bitten by the bigger boat bug and is selling his Tane. This 28' 3 berth Tane has been completely repainted and fitted with strengthened bulwarks during 1976. It is cutter rigged, but can be returned to a sloop rig. Boat is available with a selection of sails, navigation and safety gear and with/without o/b. Also avon inflatable and rana clinker dinghy. Lying at Queenborough where space would be available for purchaser or sea delivery can be arranged. Price depending on inventory about £1700. Reply to: Tony Meakin, 42 Park Hill, Carshalton, Surrey.

FOR SALE. Hina. Hull beam 3'. New sprit rig 1976. Collapsible hatches, buckets, pumps, life jackets. £500 ono. Tel: Ilketshall 239 or write: Chal Chute, Bulhams, Wissett, Halesworth, Suffolk.

Chal would also very much like to crew his way across to New Zealand on a Polycat, if there is anyone going that way. Any offers?

FOR SALE. Building a 34 ft. Catamaran ? - Look no further if you need top grade marine plywood, columbian pine, Aerodux resin and Gripfast nails. Wharram plans to build this size catamaran also available. Will make good reduction for a bulk buy. Mr. G. Rundle, Croydon 01-654-8441.